

Hustler Diesel Z

Parts Manual



Hustler Turf Equipment

•••••

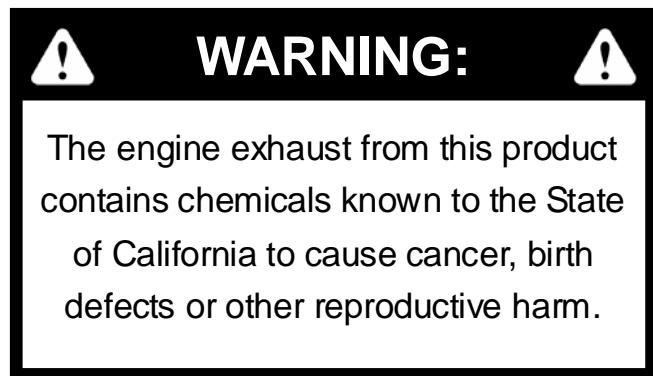
P.O. Box 7000

•••

Hesston, Kansas

•

67062-2097



IMPORTANT: This engine is not equipped with a spark arrester muffler. It is a violation of California Public Resource Code Section 4442 to use or operate this engine on any forest-covered, brush-covered, or grass-covered unimproved land. Other states or federal areas may have similar laws.

This spark ignition system complies with Canadian ICES-002.

The Engine Owner's Manual provides information regarding the U.S. Environmental Protection Agency (EPA) and the California Emission Control Regulation of emission systems, maintenance and warranty.

Keep Engine Owner's Manual with your unit. Should the Engine Owner's Manual become damaged or illegible, replace immediately. Replacements may be ordered per the information found in the Product Information section of the owner's manual.

Table of Contents

Chapter 1

General Information	1-1
---------------------------	-----

Chapter 2

Footrest Assembly	2-2
Rivet Nut Installation	2-4

Chapter 3

Hydraulic Component Fittings	3-2
Hydraulic Component Mounting	3-4
Hydraulic Line Connections	3-6

Chapter 4

Deck Lift Assembly	4-2
Steering Sub-Assembly	4-4
Steering System	4-6
Brake System	4-8

Chapter 5

Engine Sub-Assembly	5-2
Belt Drive System	5-6
Firewall & ROPS Assembly	5-10
Air Filter Installation	5-12
Cooling System Installation	5-14
Engine Cover Installation	5-16
Fuel System	5-18
Battery and Electrical Connections	5-20
Instrument Panel	5-22
Electrical Schematic—601367	5-24

Chapter 6

Front Wheel Assembly	6-2
Front Wheel Breakdown—747782	6-4
Optional Semi-Pneumatic Tire/Wheel—789537	6-5
Drive Wheel Assembly Installation	6-6
Anti-Rollover Wheel Assembly	6-7

Chapter 7

72" Side Discharge XR7 Deck Assembly	7-2
72" Side Discharge XR7 Deck Pulley Assembly	7-4
66" Side Discharge XR7 Deck Assembly	7-6
66" Side Discharge XR7 Deck Pulley Assembly	7-8
60" Side Discharge XR7 Deck Assembly	7-10
60" Side Discharge XR7 Deck Pulley Assembly	7-12
54" Side Discharge XR7 Deck Assembly	7-14
54" Side Discharge XR7 Deck Pulley Assembly	7-16
Side Discharge Deck—"A" Adaptors	7-18
Side Discharge Deck—"B" Adaptors	7-20
72" Rear Discharge Deck Assembly	7-22

72" Rear Discharge Deck Pulley Assembly	7-24
60" Rear Discharge Deck Assembly	7-26
60" Rear Discharge Deck Pulley Assembly	7-28
54" Rear Discharge Deck Assembly	7-30
54" Rear Discharge Deck Pulley Assembly	7-32
Spindle Assembly—796235X.....	7-34
Spindle Assembly—796680X.....	7-35

Chapter 8

Deck Installation.....	8-2
Seat Installation	8-4
72", 66" & 54" Side Disch. Deck Belt Routing/Tensioning	8-6
60" Side Disch. XR7 Deck Belt Routing/Tensioning.....	8-7
72", 60" & 54" Rear Discharge Deck Belt Routing/Tensioning.....	8-8

Chapter 9

Tractor Decals	9-2
72" Side Discharge XR7 Deck Decals	9-4
66" Side Discharge XR7 Deck Decals	9-5
60" Side Discharge XR7 Deck Decals	9-6
54" Side Discharge XR7 Deck Decals	9-7
72" Rear Discharge Deck Decals.....	9-8
60" Rear Discharge Deck Decals.....	9-9
54" Rear Discharge Deck Decals.....	9-10

Chapter 10

Assembly Pictures and Aids.....	10-3
Maintenance & Adjustment Safety	10-10
Maintenance	10-14
Adjustment	10-30

Index.....	i-1
------------	-----

Chapter 1

General Information

This Manual covers Hustler Diesel Z models 928606A/B, 928614A/B, 928622A/B, 928630A/B, 928648, 928655 & 928663.

Frequently Ordered Parts

PART NO.	DESCRIPTION
601413X	Hydraulic Oil Filter Element
601424	Pump Drive Belt 48.50 PVL X 4
601531	Deck Belt B-Sec 235" EL (72" Side Disch. Deck)
601528	Deck Belt B-Sec 224" EL (66" Side Disch. Deck)
601466	Deck Belt B-Sec 216" EL (60" Side Disch. Deck)
601525	Deck Belt B-Sec 201" EL (54" Side Disch. Deck)
601692	Deck Belt BB-Sec 268" EL (72" Rear Disch. Deck)
601673	Deck Belt BB-Sec 251.4" EL (60" Rear Disch. Deck)
601691	Deck Belt BB-Sec 240.8" EL (54" Rear Disch. Deck)
798702	Blade, F24.50"-H-F-CW
798496	Blade, F22.50"-H-F-CW
794685	Blade, F20.50" H-F-CW
797696	Blade, F18.50"-H-F-CW
796839	Blade, F23.86"-L-F-CW
796508	Blade, F23.86"-L-F-CCW
600901	Blade, F20.50" L-F-CW
795633	Blade, F20.50" L-F-CCW
601012	Blade, F18.50" L-F-CW
601013	Blade, F18.50" L-F-CCW
130366120	Fuel Spin On Filter
785261	Main Air Filter Element
785279	Safety Air Filter Element
140517020	Engine Oil Filter

Service Literature

PART NO.	DESCRIPTION
601656	Owner's Manual
109821	Engine Manual Shibaura Diesel

Note: When ordering parts, you must use the part number as shown for each part, not the index number. Always give the model and serial number to your parts and service representative.

Note: Items sold in bulk such as seals and hoses are sold by the foot.

Using this manual

Illustrations used were current at the time of printing, but subsequent production changes may cause your machine to vary slightly in detail. Excel Industries, Inc. reserves the right to redesign and change the machine as deemed necessary, without notification. If a change has been made to your machine which is not reflected in this parts manual, see your Hustler dealer for current information and parts.

Hardware Description Codes & Abbreviations

The following codes are used throughout this parts manual. Refer to this list when ordering parts.

ABBREVIATION	DESCRIPTION
CB	Carriage Bolt
CE	Clevis Pin
CP	Cotter Pin
CS	Cap Screw
CW	Cup Washer
FDRW	Fender Washer
FW	Flat Washer
HX	Hex Head
LW	Lock Washer
MB	Machine Bushing
MS	Machine Screw
NT	Nut
SC	Self Tapping Cap Screw
SH	Socket Head
SB	Shoulder Bolt
SS	Set Screw
OD	Outside Diameter
ID	Inside Diameter

Standard Torques

The following chart lists the standard torque values for the threaded fasteners found in this manual. Torque all cap screws, nuts and set screws to these values unless a different torque is shown in the Notes section next to the fastener.

SIZE	FT-LBS	NM	SIZE	FT-LBS	NM
.250	8.2	11.1	M3	1	1.3
.312	17	23	M4	2.2	3
.375	30	40	M5	4.5	6.1
.438	48	65	M6	7.7	10.4
.500	73	99	M8	18.5	25
.562	105	143	M10	37	50
.625	145	200	M12	64	87
.750	260	350	M14	80	108.5
.875	420	565	M16	160	215
1.00	625	850	M20	320	435
			M24	555	750

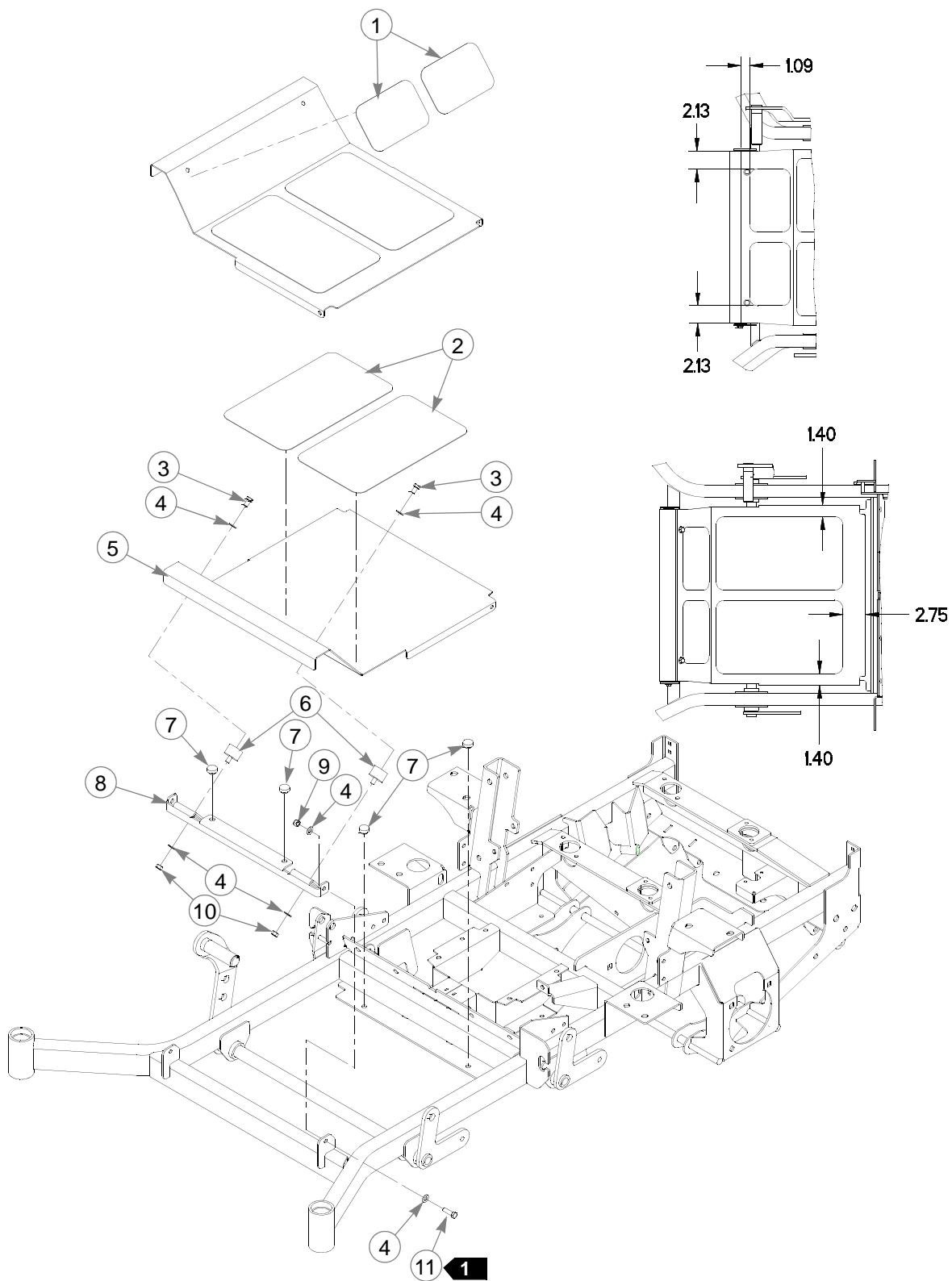
NOTE:

Loctite® 592 to be used on all pipe threads.
Lubricate all grease zerks.

Chapter 2 Contents

Footrest Assembly	2-2
Rivet Nut Installation	2-4

Footrest Assembly



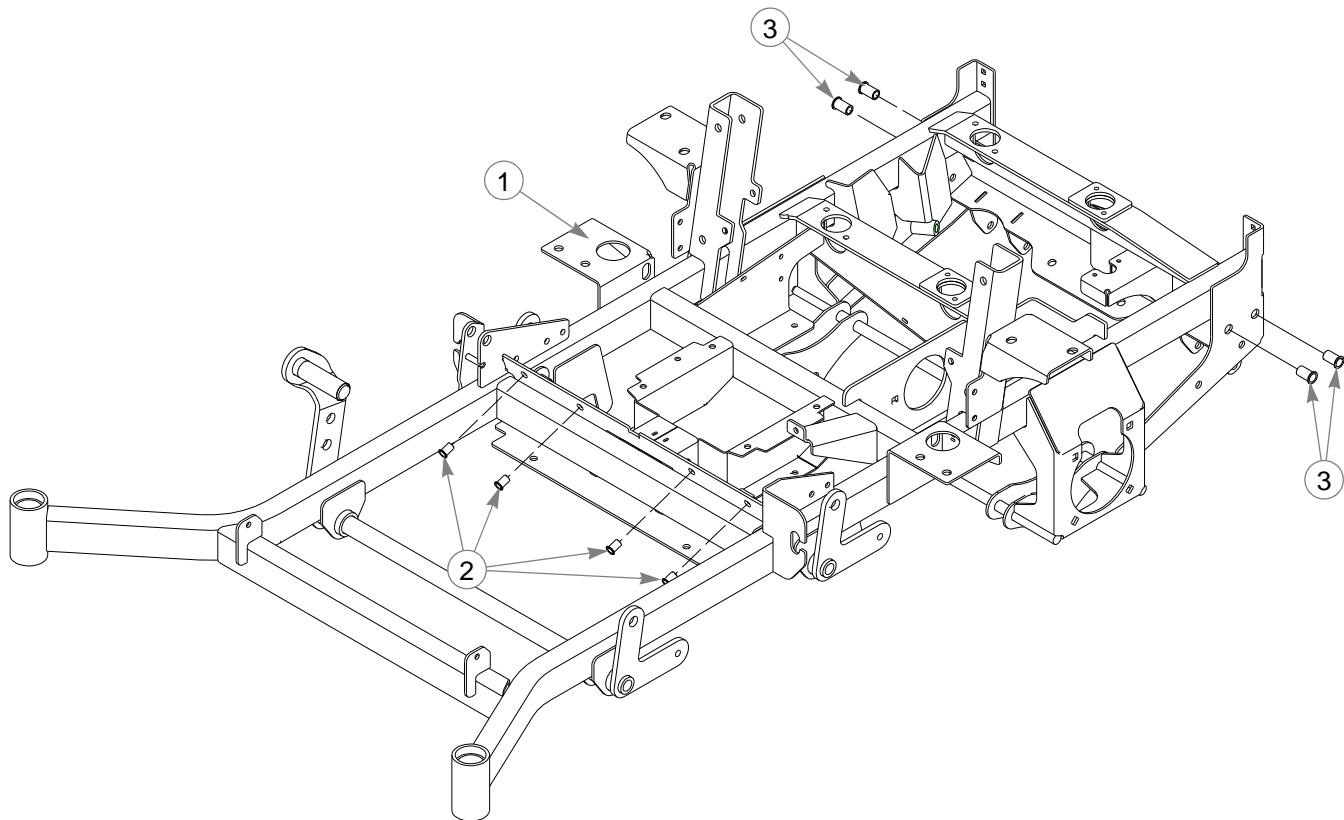
Footrest Assembly

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	785485	785485	2	UPPER STEP TREAD 5.00
2	785493	785493	2	LOWER STEP TREAD 9.00
3	056069	056069	2	CS .375-16X .625 HX G5
4	767954	767954	8	FW .406X .812 X.060 SAE
2	549410	109104	1	FLOOR PLATE HDZ
6	601571	601571	2	VIBRATION MOUNT
7	781880	781880	4	BUMPER .500X 1.00X .31
8	109399	109399	1	FLOOR PAN MOUNT STRAP
9	086660	086660	4	NT .375-16 HXZY NL
10	054502	054502	2	NT .375-16 HX GRD 5 ZNY
11	052860	052860	2	CS .375-16X1.250 HX G5

NOTES:

1. Do not tighten, Item 5 (109104 Floor Plate) must be able to pivot on these bolts.
2. Service part includes Items 1 and 2 (step treads).

Rivet Nut Installation



INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	549139	109624	1	TRACTOR FRAME (72" SIDE DISCHARGE)
	549121	109621	1	TRACTOR FRAME (66" SIDE DISCHARGE)
	549113	108932	1	TRACTOR FRAME (60" SIDE DISCHARGE)
	549105	109617	1	TRACTOR FRAME (54" SIDE DISCHARGE)
	549758	110626	1	TRACTOR FRAME (72" REAR DISCHARGE)
	549618	110623	1	TRACTOR FRAME (60" REAR DISCHARGE)
	549766	110628	1	TRACTOR FRAME (54" REAR DISCHARGE)
2	808493	808493	4	3/8-16 THREAD RIVET NUT
3	600961	600961	4	1/2-13 THREAD RIVET NUT

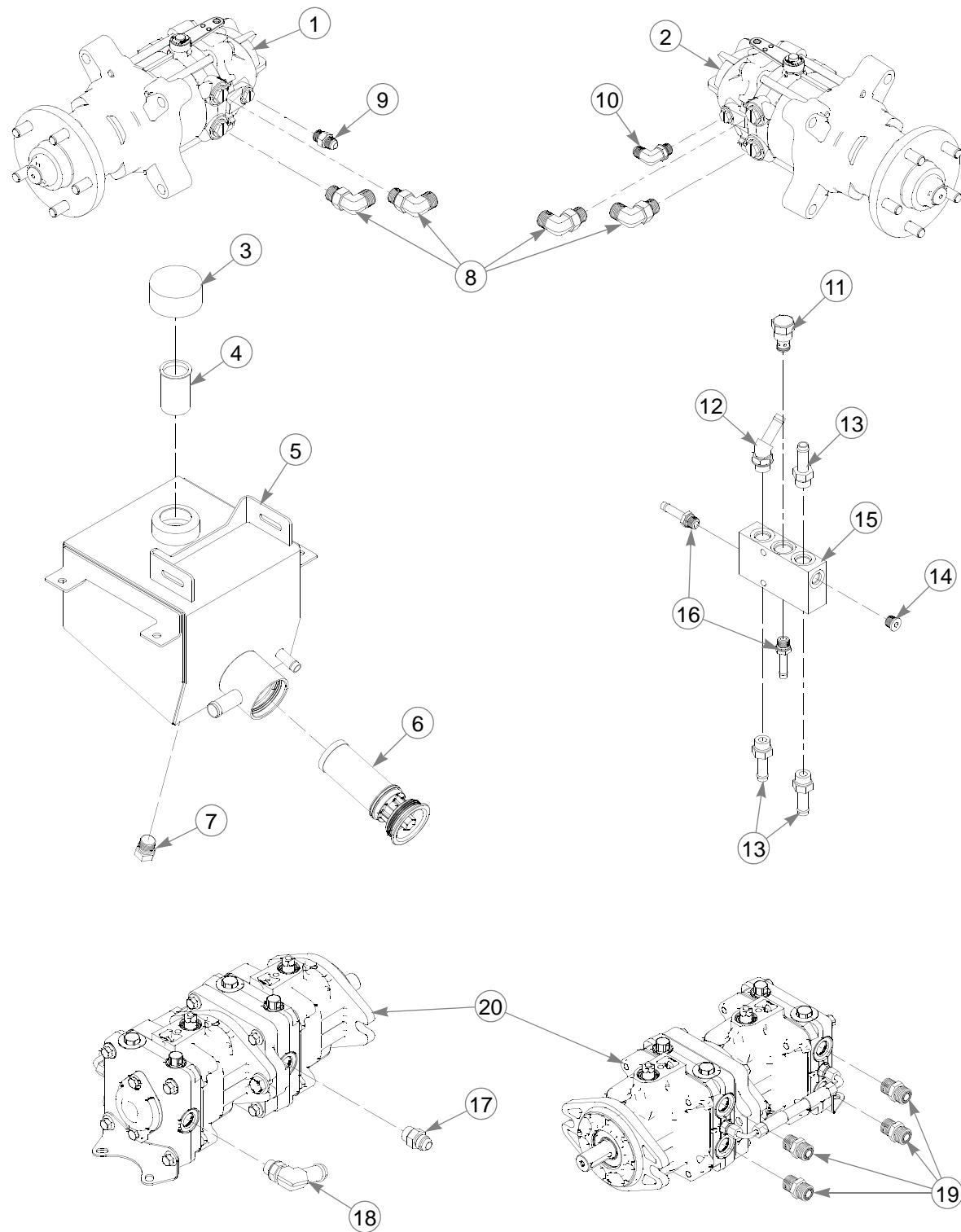
NOTES:

1. Service part includes Items 2 and 3 and decals. See "Tractor Decals" on page 9-2.

Chapter 3 Contents

Hydraulic Component Fittings	3-2
Hydraulic Component Mounting	3-4
Hydraulic Line Connections	3-6

Hydraulic Component Fittings



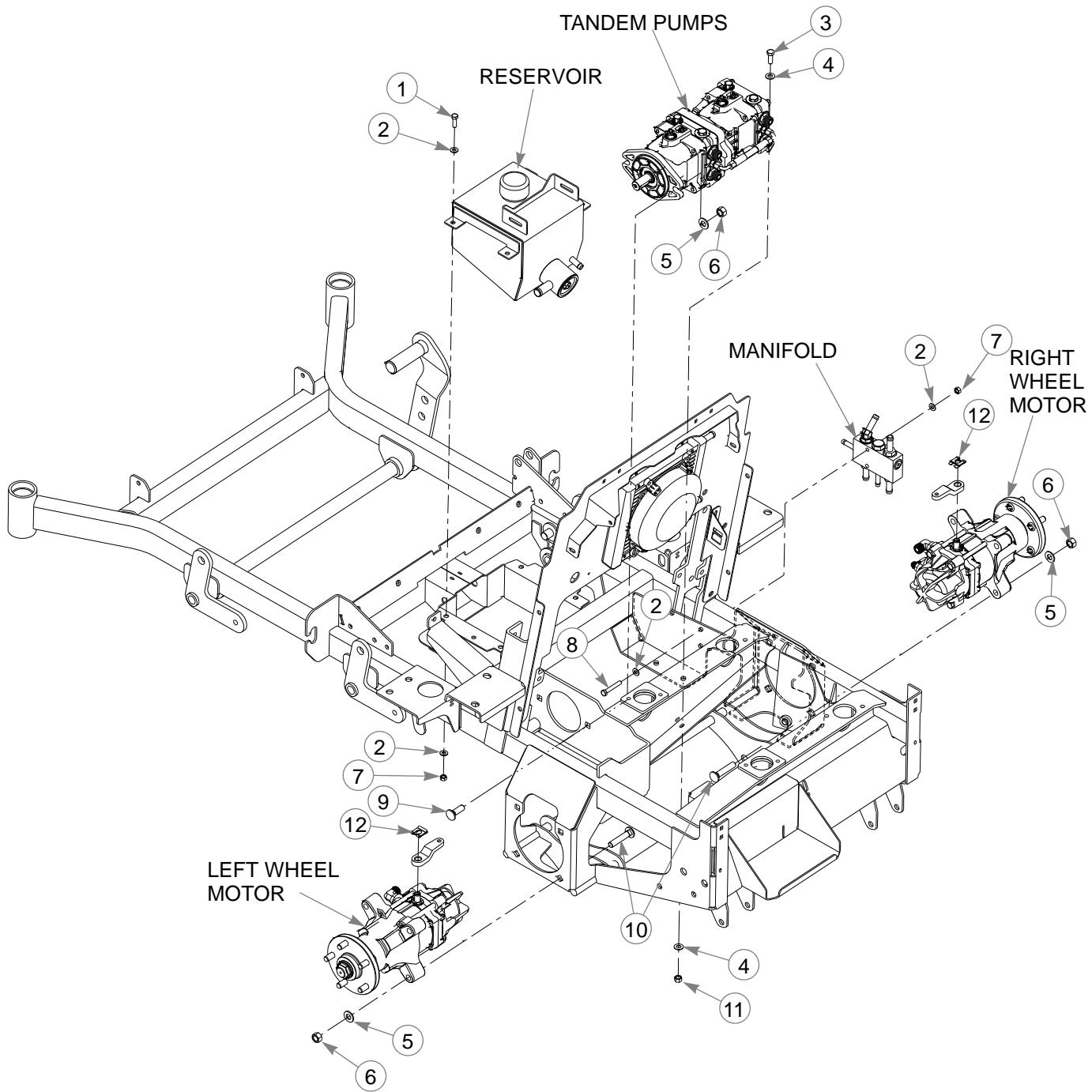
Hydraulic Component Fittings

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	601556	601556	1	WHEEL MOTOR RH
2	601557	601557	1	WHEEL MOTOR LH
3	032763	032763	1	BREATHER CAP
4	032771	032771	1	STRAINER
2	549345	109366	1	RESERVOIR W/A HDZ
6	601413X	601413	1	FILTER ELEMENT
7	781658	N/A	1	FITTING STR-8MORB/HEX
8	781542	N/A	4	FITTING 90-8MORB/-8MSL
9	779132	N/A	1	FITTING STR-6MORB/-6JI
10	795922	N/A	1	FITTING 90-6MORB/-6MJI
11	601568	N/A	1	VALVE CARTRIDGE CHECK
12	601592	N/A	1	FITTING -8MORB/-8BEAD
13	601523	N/A	3	FITTING -8MORB/-8 BEAD
14	601569	N/A	1	FITTING PLUG -8MORB/HEX
15	601476	N/A	1	MANIFOLD CASE DRAIN
16	787473	N/A	2	FITTING -6MORB/-6 BEAD
17	771337	N/A	1	FITTING STR-8MORB/-8MJ
18	601524	N/A	1	FITTING -8MORB/-12 BEAD
19	781534	N/A	4	FITTING STR-8MORB/-8MS
20	601318	601318	1	PUMP HG TANDEM 21
	N/A	601498	1	HYDRO KIT HDZ (INCLUDES 7-19)

NOTES:

1. Hydraulic system capacity is 7 US quarts. Fill reservoir to within 1" of top of Item 4 (032771 Strainer).
2. Service part includes safety decal 779280. See "Tractor Decals" on page 9-2.

Hydraulic Component Mounting



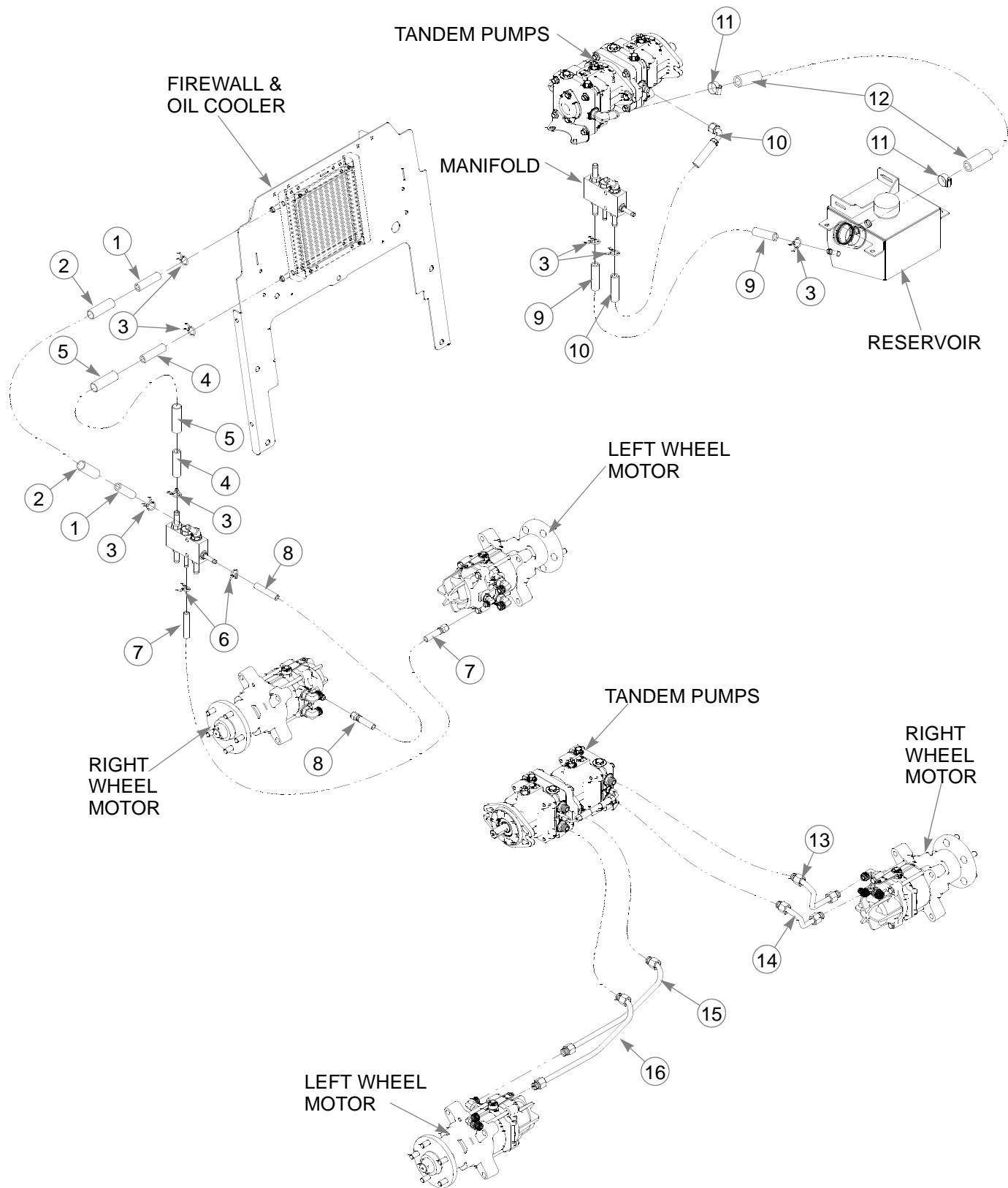
Hydraulic Component Mounting

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	036236	036236	4	CS .312-18X1.000 HX G5
2	768523	768523	12	FW .343X.687X.051/.080H
3	036244	036244	2	CS .375-16X1.000 HX G5
4	767954	767954	4	FW .406X .812 X.060 SAE
5	767962	767962	10	FW .531X 1.063X.090 SAE
6	008193	008193	10	NT .500-13 HX G5 ZNYC
7	034272	034272	6	NT .312-18 HX G5 ZNYC
8	064345	064345	2	CS .312-18X2.000 HX G5
9	028274	028274	2	CB .500-13X 1.500 FULL
10	601427	601427	8	CB .500-13 X 2.500 G5 ZN
11	054502	054502	2	NT .375-16 HX GRD 5 ZNY
12	601247	N/A	2	BRAKE ARM RETAINING CLIP

NOTES:

1. Part of wheel motors (601556 and 601557).

Hydraulic Line Connections



Hydraulic Line Connections

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	601521	N/A	1	HOSE MANIFOLD BLOCK TO OIL COOLER
2	601583	N/A	1	HOSE MANIFOLD BLOCK
3	601001	601001	7	SPRING CLAMP .75" DIA
4	601522	N/A	1	HOSE RETURN COOLER TO MANIFOLD BLOCK
5	601584	N/A	1	HOSE MANIFOLD BLOCK
6	601617	601617	2	SPRING CLAMP 5/8" DIA.
7	601519	N/A	1	HOSE CASE DRAIN LEFT MOTOR
8	601518	N/A	1	HOSE CASE DRAIN RIGHT MOTOR
9	601570	N/A	1	HOSE RETURN MANIFOLD BLOCK TO RESERVOIR
10	601520	N/A	1	HOSE CASE DRAIN PUMP TO MANIFOLD
11	700484	700484	2	CLAMP HOSE (FS)
12	601517	N/A	1	HOSE SUCTION HDZ HYDRO
13	601494	N/A	1	TUBE TP-TM RT LOOP
14	601495	N/A	1	TUBE BP-BM RT LOOP
15	601496	N/A	1	TUBE TP-TM LT LOOP
16	601497	N/A	1	TUBE BP-BM LT LOOP
	N/A	601498	1	HYDRO KIT HDZ (INCLUDES 1, 2, 4, 5,7-10, & 12-16)

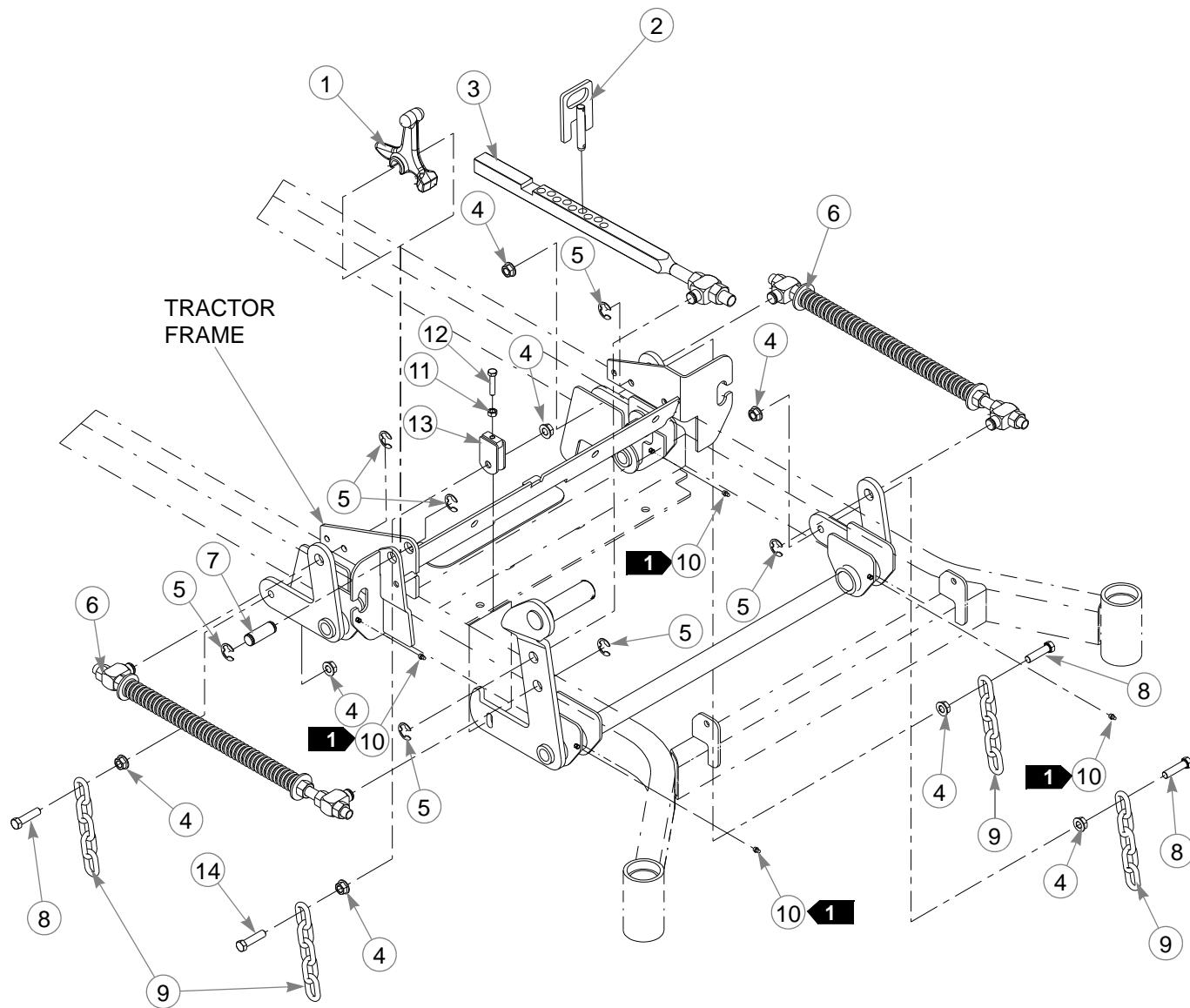
NOTES:

1. See "Hydraulic routing" on page 10-8.

Chapter 4 Contents

Deck Lift Assembly	4-2
Steering Sub-Assembly	4-4
Steering System	4-6
Brake System	4-8

Deck Lift Assembly



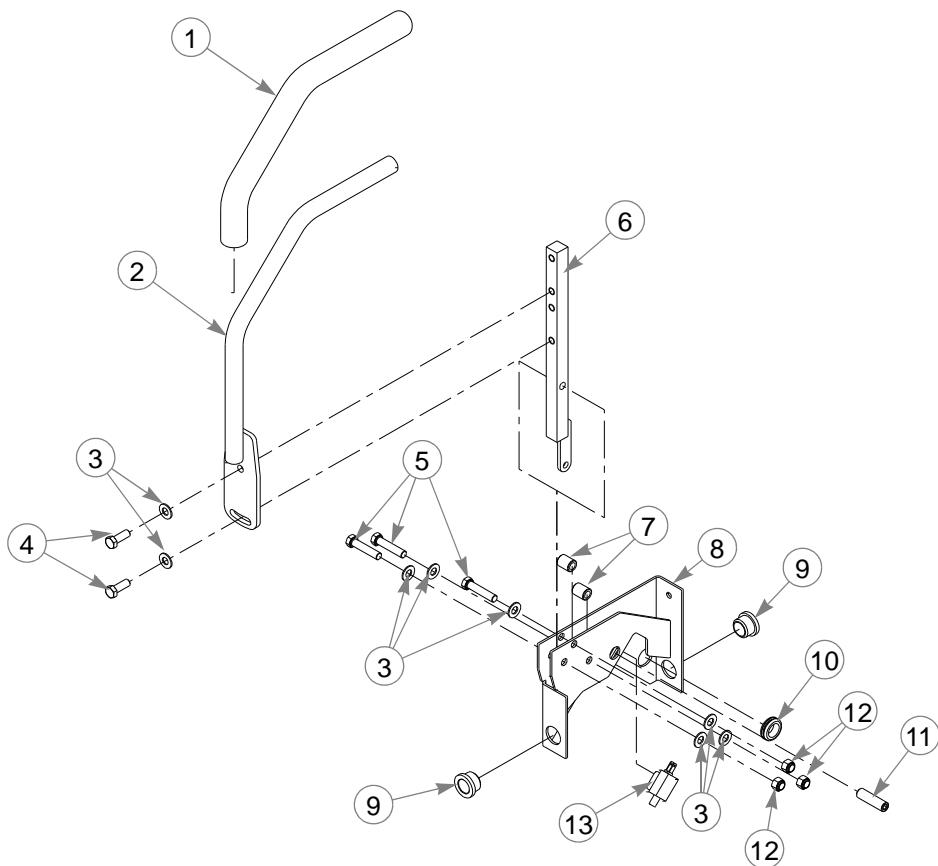
Deck Lift Assembly

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY	DESCRIPTION
1	348318	348318	1	STOP HANDLE
2	600437	600437	1	DECK HEIGHT 1/2" PIN W/A
3	783001	783001	1	DECK LIFT INDICATOR SUBASSEMBLY
4	704643	704643	8	NT .437-14 HX FLG ZN
5	781294	781294	7	CLIP E, 1.00 X .625 X .050
6	782995	782995	2	DECK LIFT SPRING SUBASSEMBLY
7	781229	781229	1	CE .750 X 2.25 X 1.75 HEADLESS
8	055749	055749	3	CS .437-14 X 1.750 HX G5 ZN
9	348391	018846	4	DECK LIFT CHAIN
10	015495	015495	4	STRAIGHT GREASE FITTING
11	034272	034272	1	NT .312-18 HX G5 ZN
12	756270	756270	1	CS .312-18 X 1.50 FUL THR GR5 ZN
13	348458	348458	1	DECK LEVELER YOKE
14	781831	781831	1	CS .437-14 X 1.750 FUL THD G5 ZN

NOTES:

1. Apply grease to zerks (see owner's manual).

Steering Sub-Assembly



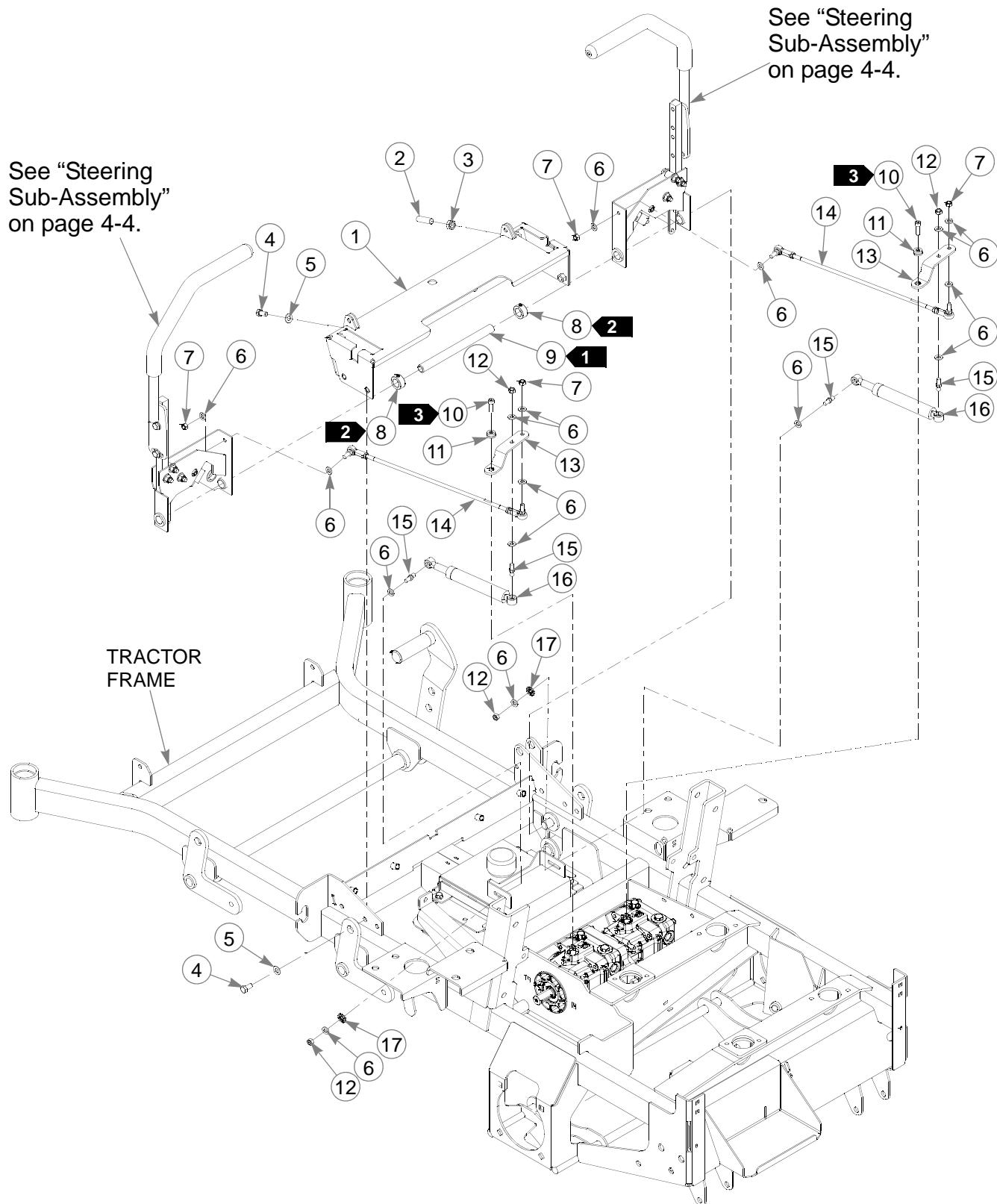
INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	781260	N/A	2	STEERING BAR GRIP
2	109839	109839	2	HANDLE Z W/A
3	767954	767954	16	FW .406X .812 X.060 SAE
4	036244	036244	4	CS .375-16X1.000 HX G5
5	705178	705178	6	CS .375-16X1.750 HX G5
6	348946	348946	2	STEERING ARM MNT W/A
7	348862	348862	4	STEERLEVER BUSHING
8	109260	109260	1	STEERING BOX W/A LH
	109259	109259	1	STEERING BOX W/A RH
9	781153	781153	4	BUSHING UHMW
10	047456	047456	2	GM .750X.188X1.00X.12
11	781716	781716	2	SS .500-13X 1.750 SH ZNY
12	086660	086660	6	NT .375-16 HXZY NL
13	601087	601087	2	SWITCH PLUNGER

NOTES:

1. Includes Item 1 (781260 Steering Bar Grip).

This page intentionally left blank.

Steering System



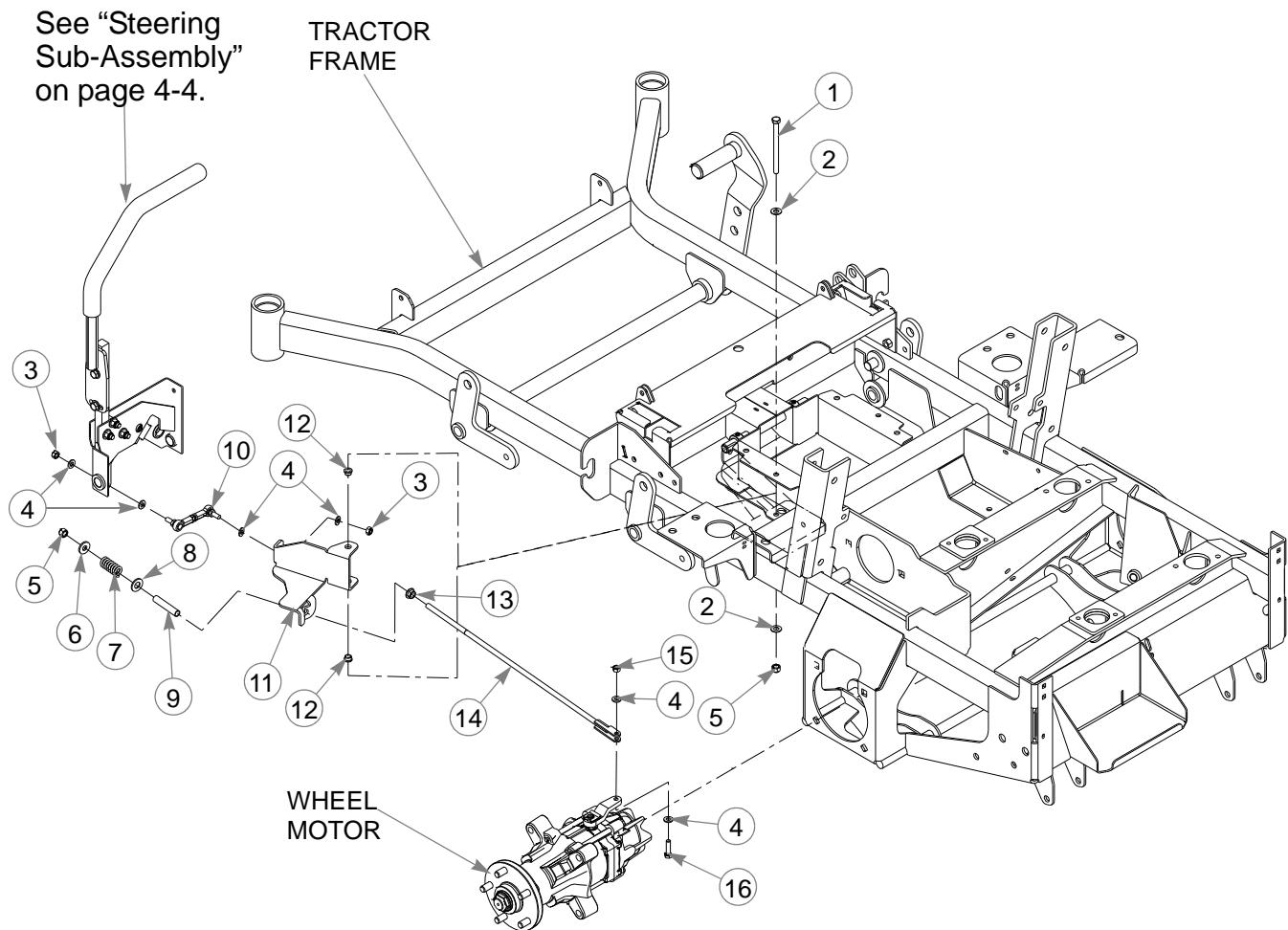
Steering System

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY	DESCRIPTION
1	348987	348987	1	STEERING CONTROL PANEL
2	781716	781716	2	SS .500-13X 1.750 SH ZNY
3	053199	053199	2	NT .500-13 HX JAM ZNYC
4	055822	055822	8	CS .375-16X .750 HX G5
5	767954	767954	8	FW .406X .812 X.060 SAE
6	768523	768523	16	FW .343X.687X.051/.080H
7	023655	023655	4	NT .312-24 HXZY NL
8	784439	784439	2	LOCK COLLAR 0.757 ID(FS)
9	108813	108813	1	STEER PIVOT TUBE
10	795377	795377	2	CS M 8-1.25X25 SH BO NY
11	795369	795369	2	RETAINER PUMP ARM HYDR
12	034272	034272	4	NT .312-18 HX G5 ZNYC
13	109118	109118	2	PUMP ARM HDZ
14	781286	781286	2	PUMP ROD ADJUSTER ASSY
15	781922	781922	4	BALL STUD DAMPER
16	600221	600221	2	STEERING DAMPER
17	029876	029876	2	LW .312 INT-EXT TOOTH Z

NOTES:

1. Tube ends to be clean and free of rust. Apply thin coat of grease prior to installing 781153 Bushing (item 9 on page 4-4).
2. Item 8 (784439 Lock Collar) to be adjusted such that 109259/109260 Steering Box (Item 8 on page 4-4) has no end play.
3. Torque to 180-200 in-lbs.

Brake System



Brake System

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY	DESCRIPTION
1	782979	782979	2	CS .375-16X4.750 HX G5
2	767954	767954	4	FW .406X .812 X.060 SAE
3	023655	023655	4	NT .312-24 HXZY NL
4	768523	768523	12	FW .343X.687X.051/.080H
5	086660	086660	4	NT .375-16 HXZY NL
6	712919	712919	2	FW .406X 1.00X.12 HRD Z
7	601566	601566	2	OVERTRAVEL SPRING
8	767962	767962	2	FW .531X 1.063X.090 SAE
9	109718	109718	2	BRAKE ROD GUIDE HDZ
10	781583	781583	2	BRAKE ROD ASSEMBLY
11	109109	109109	1	BRAKE BELL CRANK LS
	109110	109110	1	BRAKE BELL CRANK RS (NOT SHOWN)
12	765339	765339	4	BUSHING IGUS#0608
13	016899	016899	2	NT .375-16 HXFLK ZNYC
14	109355	109355	2	BRAKE ROD ASSY HDZ
15	058776	058776	2	NT .312-18 HXZY NL
16	079186	079186	2	CS .312-18X1.250 HX G5

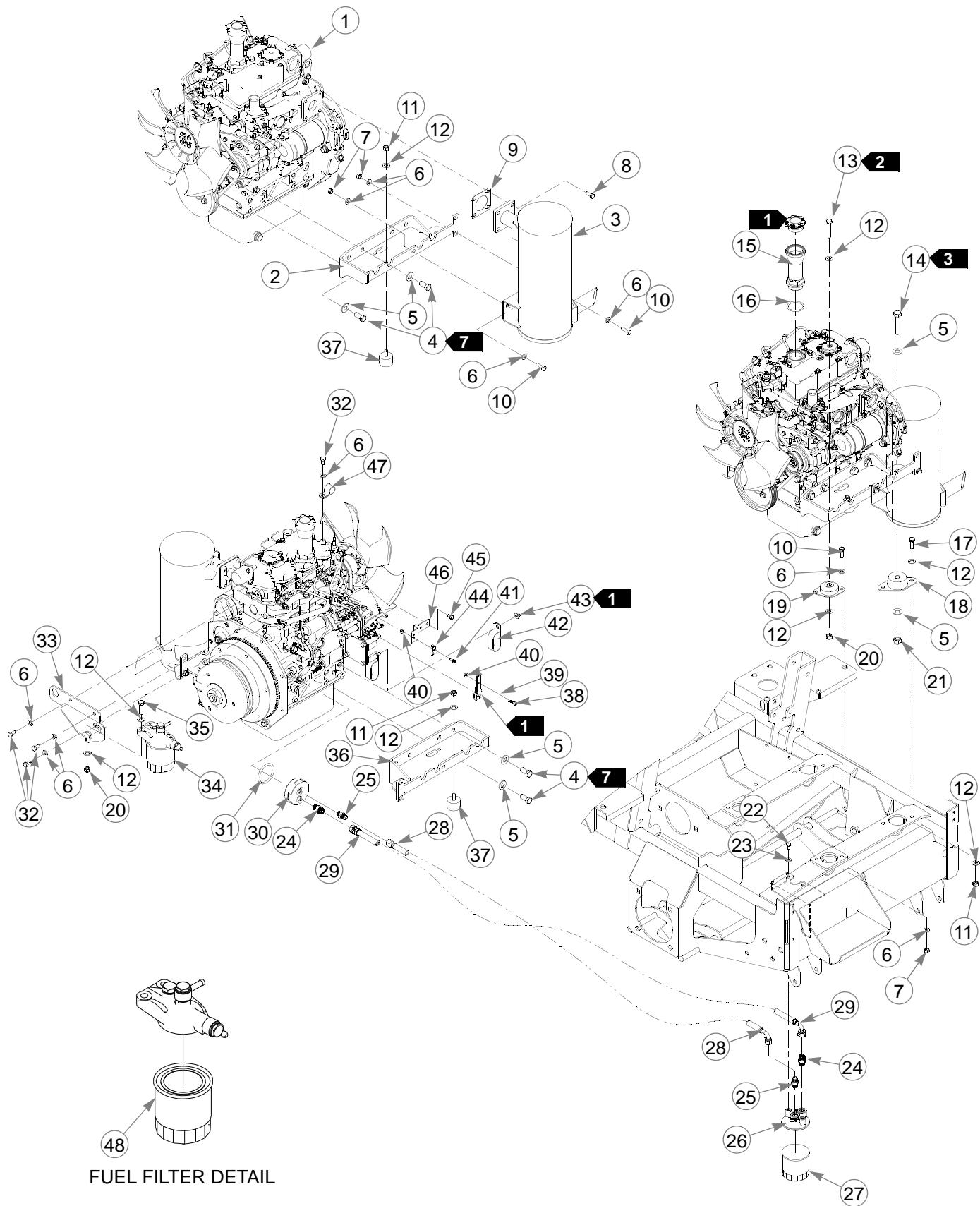
NOTES:

1. Do not torque this fastener, should be snug but allow Item 11 (109109/ 109110 Brake Bell Crank) to pivot freely.

Chapter 5 Contents

Engine Sub-Assembly	5-2
Belt Drive System	5-6
Firewall & ROPS Assembly	5-10
Air Filter Installation	5-12
Cooling System Installation	5-14
Engine Cover Installation	5-16
Fuel System	5-18
Battery and Electrical Connections	5-20
Instrument Panel	5-22
Electrical Schematic—601367	5-24

Engine Sub-Assembly



Engine Sub-Assembly

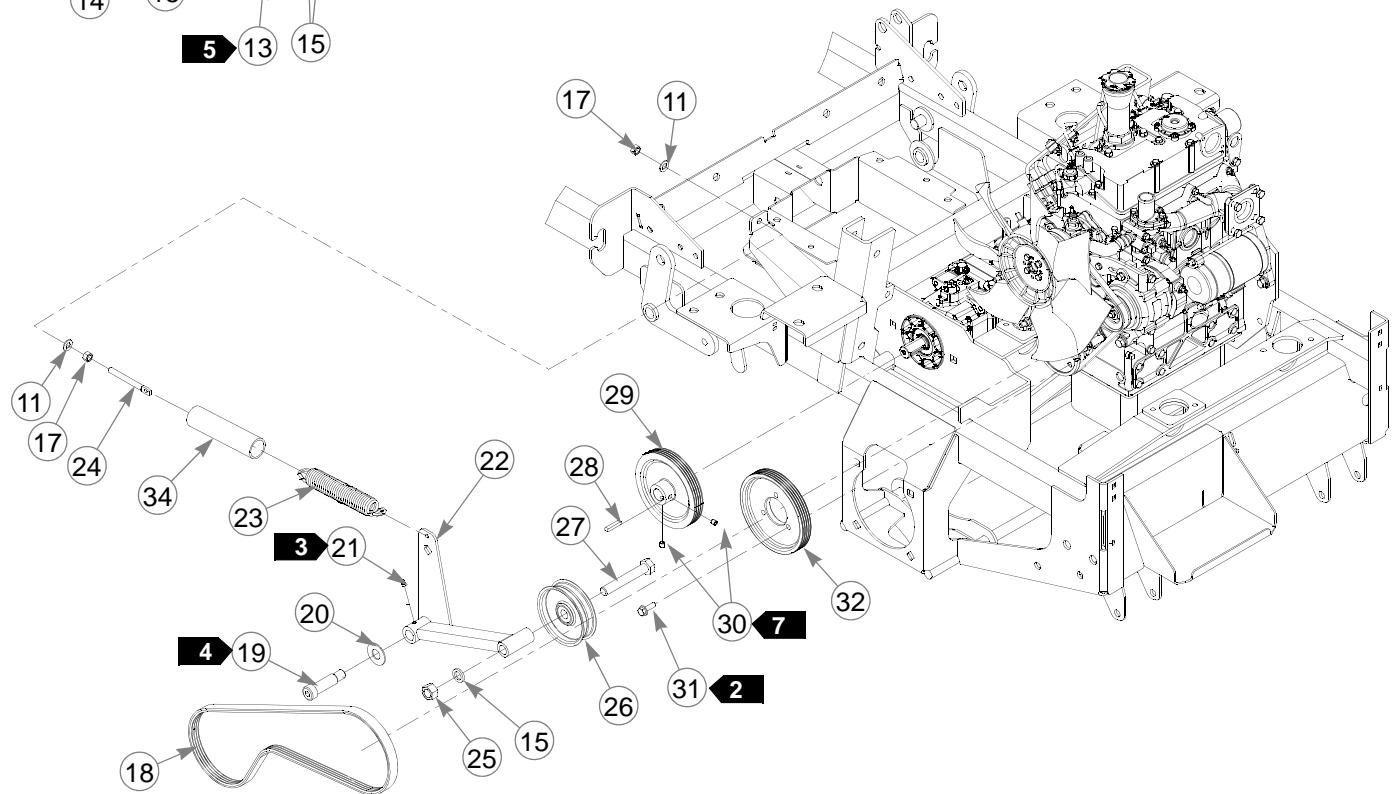
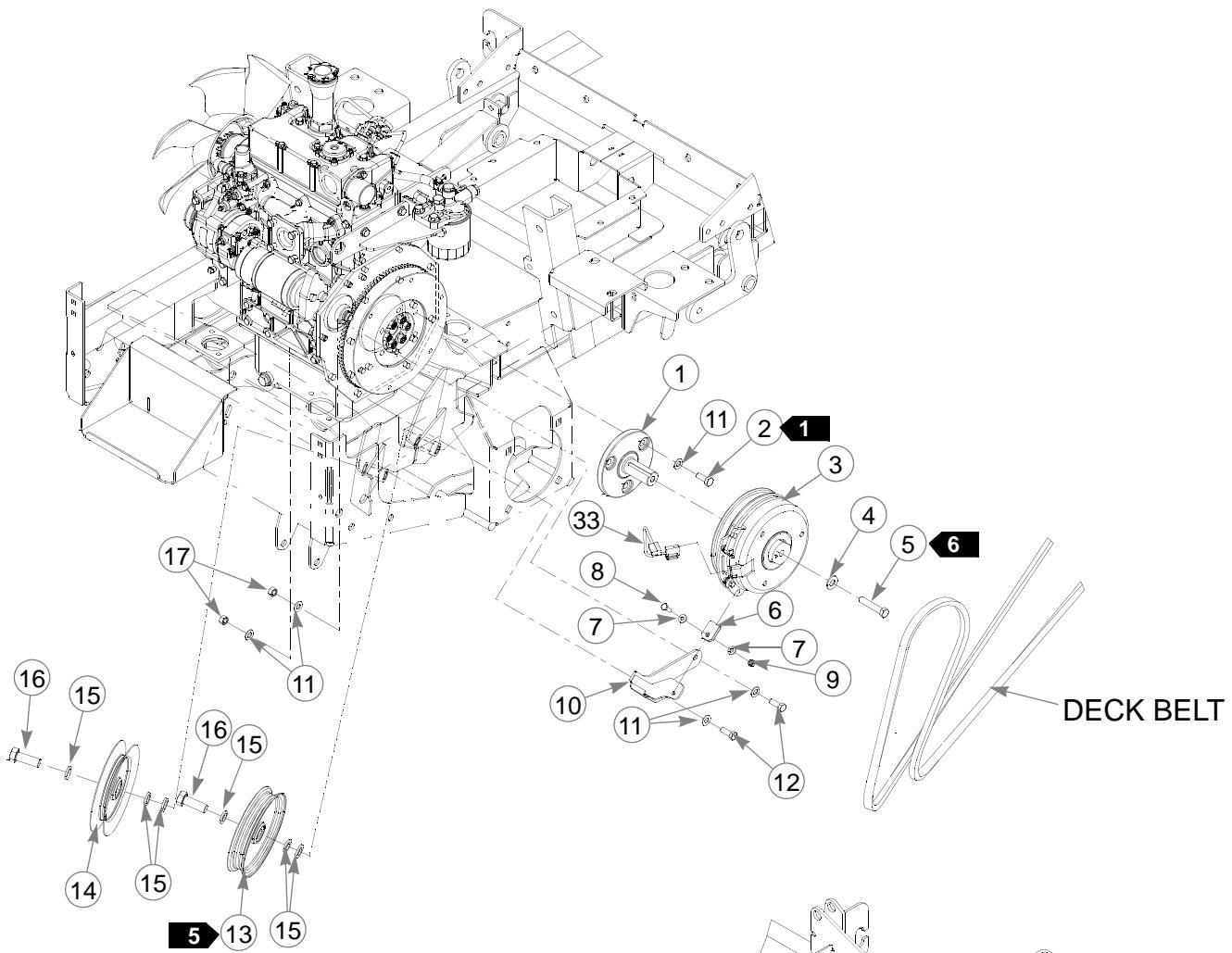
INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	601355	601355	1	ENGINE, ISM S773L DIESEL
2	108976	108976	1	MOTOR MNT W/A RS, HDZ
3	601361	601361	1	MUFFLER, ISM S773L HDZ
4	601428	601428	16	CS M12-1.25 X 25 ZN
5	767962	767962	20	FW .531X 1.063X.090 SAE
6	768523	768523	16	FW .343X.687X.051/.080H
7	034272	034272	10	NT .312-18 HX G5 ZNYC
8	011510820	N/A	4	M8 X 1.25 X 20 BOLT
9	314990013	N/A	1	MUFFLER GASKET
10	036236	036236	6	CS .312-18X1.000 HX G5
11	054502	054502	6	NT .375-16 HX GRD 5 ZNY
12	767954	767954	18	FW .406X .812 X.060 SAE
13	016410	016410	2	CS .375-16X2.00 G5 ZNYC
14	008573	008573	2	CS .500-13X2.500 HX G5
15	110466031	N/A	1	OIL FILLER EXTENSION
16	052100420	N/A	1	OIL FILLER O-RING
17	036244	036244	4	CS .375-16X1.000 HX G5
18	601515	601515	2	ISO MNT REAR ENG - HDZ
19	601516	601516	2	ISO MNT FRONT ENG - HDZ
20	086660	086660	4	NT .375-16 HXZY NL
21	781567	781567	2	NT .500-13 HX G8 ZY NL
22	055947	055947	2	CS .250-20X .500 HX G5
23	768515	768515	2	FW .281X.625X.051/.080H
24	792150	N/A	2	FITTING STR-6MORB/-6MS
25	779132	N/A	2	FITTING STR-6MORB/-6JI
26	601487	601487	1	FILTER HEAD HDZ
27	140517020	N/A	1	OIL FILTER
28	601546	N/A	1	HOSE OIL FILTER RELOC
29	601547	N/A	1	HOSE OIL FILTER RELOC
30	601526	601526	1	ADAPTER REMOTE OIL FILTER
31	601567	601567	1	O-RING HDZ REMOTE OIL FILTER
32	053678	053678	4	CS M 8-1.25X16 HX G8.8
33	109358	109358	1	BRACKET FUEL FILTER W/A
34	130306190	N/A	1	FUEL FILTER ASS'Y (INCLUDES 130366120 FILTER)
35	005116	005116	2	CS .375-16X1.375 HX G5
36	109589	109589	1	MOTOR MNT W/A LS HDZ
37	601650	601650	2	VIBRATION MOUNT
38	601493	601493	1	SB .250DX.250L 10-24 ZN
39	017079	017079	2	FW .250X .560X.04 SAE Z
40	016774	016774	2	NT #10-24 HXFLK ZN
41	794495	794495	1	CS 10-24 X .500 SKTHD Z
42	045088	045088	1	HOSE CLAMP 1"
43	023100008	N/A	1	M8 X 1.25 NUT
44	011841	011841	1	CONDUIT CLIP
45	739144	739144	2	CS M 6-1.0 X 12 10.9 HX
46	109419	109419	1	THROTTLE BRACKET ISM ENGINE
47	043570	043570	1	CLIP - HOSE - SINGLE(FS)
48	130366120	N/A	2	FUEL SPIN ON FILTER

NOTES:

1. Supplied with engine.
2. Torque to 33 ft-lbs.
3. Torque to 78 ft-lbs.
4. Engine oil capacity: See engine owner's manual.
5. Engine RPM to be set at 2950±50.
6. Included in 601498 (Hydro Kit).
7. Torque to 64 ft-lbs.

This page intentionally left blank.

Belt Drive System



Belt Drive System

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	601279	601279	1	STUB SHAFT, ISM 773
2	038836	038836	3	CS M10-1.50X25 HX ZN
3	601278	601278	1	CLUTCH, CMS250
4	767962	767962	1	FW .531X 1.063X.090 SAE
5	778217	778217	1	CS .437-20X2.250 G5 ZNY
6	601478	601478	1	BUMPER, CLUTCH MOUNT
7	768515	768515	2	FW .281X.625X.051/.080H
8	055939	055939	1	CS .250-20X .750 HX G5
9	068551	068551	1	NT .250-20 HXZY NL
10	109725	109725	1	CLUTCH BRACKET ANCHOR HDZ
11	767954	767954	9	FW .406X .812 X.060 SAE
12	036244	036244	2	CS .375-16X1.000 HX G5
13	781385	781385	1	IDLER PULLEY NHI 6.00" (SIDE DISCH. ONLY)
	796714	796714	1	PULLEY 6" HB IDLER RD (REAR DISCH. ONLY)
14	796714	796714	1	PULLEY 6" HB IDLER RD
15	028118	028118	7	FW .625X1.00X.134 ZNYC
16	025007	025007	2	CS .625-11X1.750 HX G5
17	054502	054502	4	NT .375-16 HX GRD 5 ZNY
18	601424	601424	1	BELT 48.50 PVL X 4
19	601084	601084	1	SB .750X 2.000 SH.625-11
20	025296	025296	1	FW .760X 1.625X.08 ZNYC
21	015495	015495	1	GREASE FITTING STRAIGHT
22	109127	109127	1	IDLER ARM W/A, HDZ
23	601016	601016	1	IDLER SPRING
24	601486	601486	1	EB, .375-16X3.00 FULTHD
25	016972	016972	1	NT .625-11 HX G5 ZNYC
26	601488	601488	1	PULLEY, 4" FLAT IDLER
27	047712	047712	1	CS .625-11X4.000 HX G5
28	601713	601713	1	KEY 1/4 X 1.375 LG
29	601422	601422	1	PULLEY, 5.625" MICRO V
30	600122	600122	2	SS .312-18X .312 SH BO
31	004317	004317	3	CS M8-1.25X25 G10.9HXFL
32	601423	601423	1	PULLEY, 6.0" MICRO V
33	791251	791251	1	CLUTCH PIGTAIL HARNESS
34	601722	601722	1	SPRING DAMPER TUBE

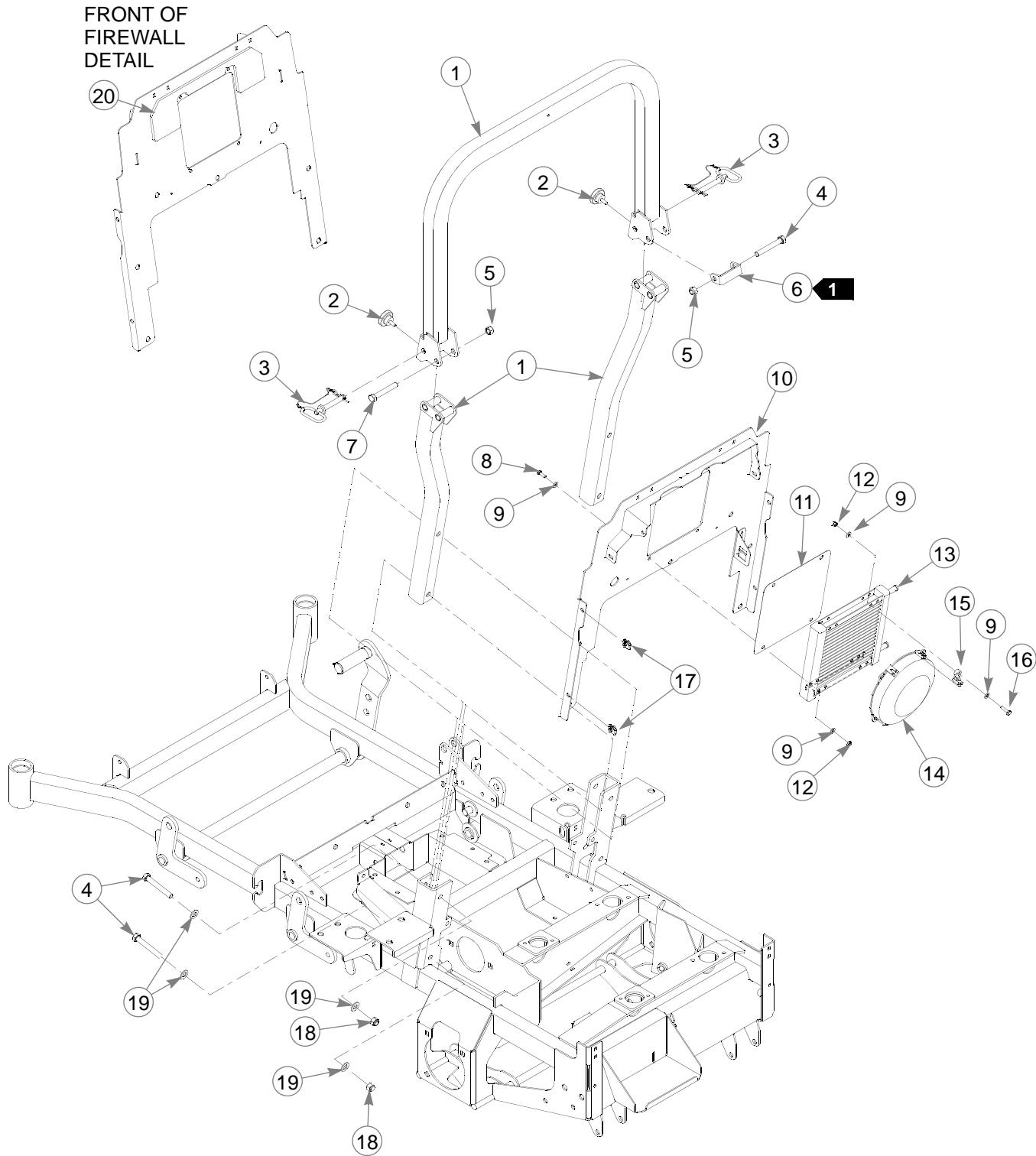
NOTES:

1. Torque to 41 ft-lbs.
2. Torque to 21 ft-lbs.
3. Apply grease to zerks.
4. Torque to 100 ft-lbs.
5. Tractors with side discharge decks use 781385; tractors with rear discharge decks use 796714.
6. Torque to 45-48 ft-lb.
7. Torque to 12-15 ft-lb.

8. For mowers with serial numbers prior to 08051277, shims are required between item 32 (pulley) and the engine. Use quantity (3) of 601662 (Arbor Shim 0.020 Thk).

This page intentionally left blank.

Firewall & ROPS Assembly



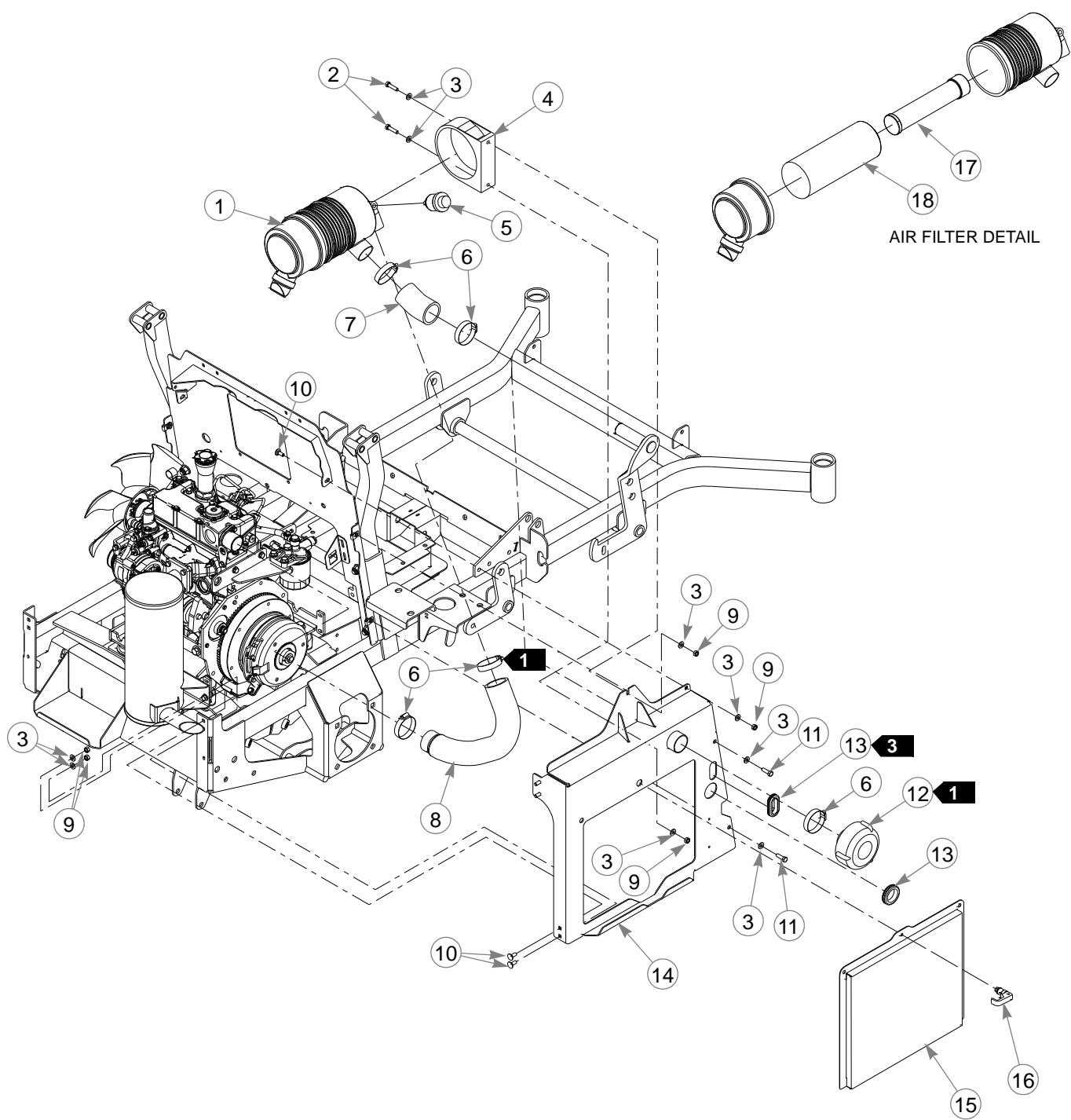
Firewall & ROPS Assembly

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	601443	601443	1	ROPS DZ FOLDING
2	601470	601470	2	KNOB HAND FOR ROPS
3	601471	601471	2	LYNCH PIN W/ LANYARD
4	061812	061812	5	CS .500-13X3.500 HX G5
5	023317	023317	2	NT .500-13 UNT LK G5 ZN
6	601472	601472	1	ROPS STOP
7	077859	077859	1	CS .500-13X3.250 HX G5
8	055939	055939	4	CS .250-20X .750 HX G5
9	768515	768515	16	FW .281X.625X.051/.080H
2	10	549352	109547	FIREWALL W/A HDZ
11	109401	109401	1	SCREEN OIL COOLER
12	068551	068551	8	NT .250-20 HXZY NL
13	601356	601356	1	OIL COOLER 8" FAN ALUM
14	601357	601357	1	FAN ELECTRIC 8" 12VDC
15	601538	601538	4	ELECTRIC FAN FOOT
16	056077	056077	4	CS .250-20X1.000 HX G5
17	601069	601069	4	CN .312-18X.200 MAX THK
18	781567	781567	4	NT .500-13 HX G8 ZY NL
19	767962	767962	1	FW .531X 1.063X.090 SAE
20	601559	601559	1	SEAT PAD

NOTES:

1. Assemble Item 6 (ROPS Stop) on right post of ROPS only.
2. Service part includes decals. See "Tractor Decals" on page 9-2.

Air Filter Installation



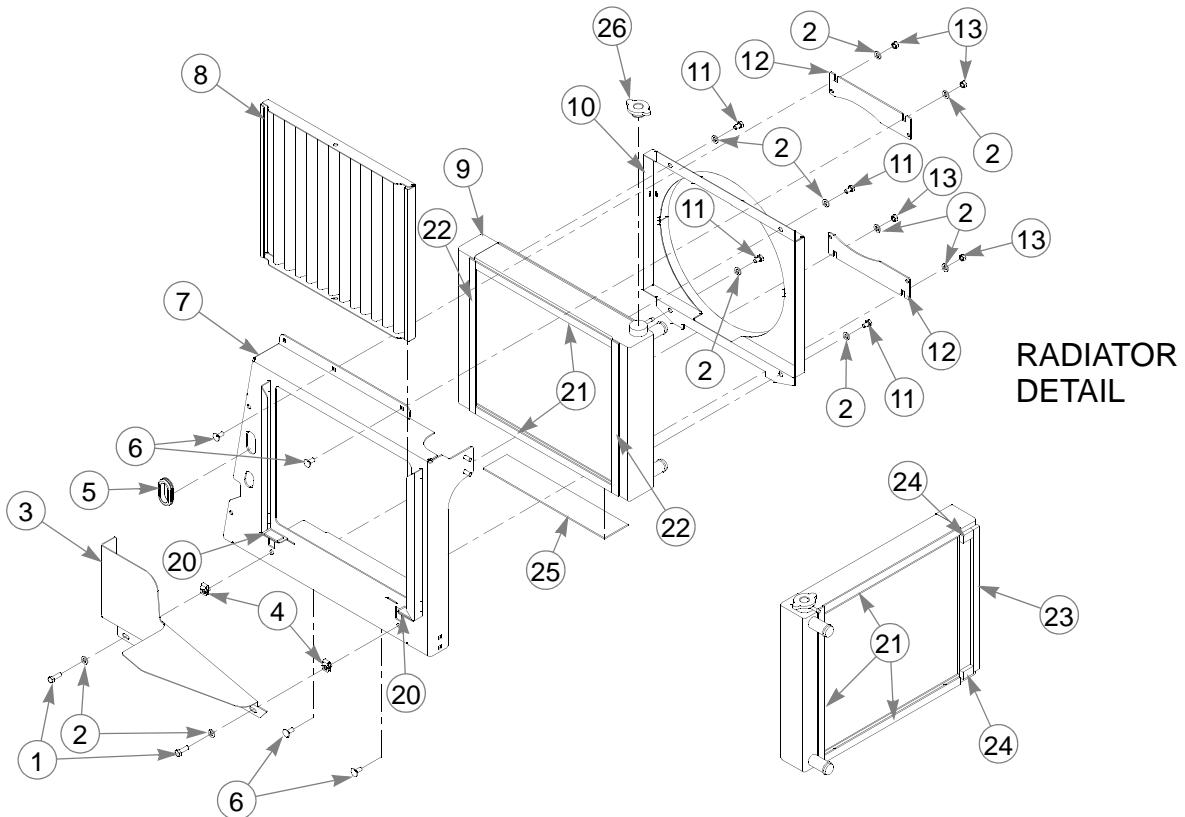
Air Filter Installation

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
3	1	782763	1	DONALDSON AIR CLEANER
	2	079186	2	CS .312-18X1.250 HX G5
	3	768523	9	FW .343X.687X.051/.080H
	4	785741	1	BAND AIR CLEANER MOUNT
	5	795138	1	AIR FILTER INDICATOR
	6	057661	5	HOSE CLAMP
	7	601359	1	HOSE FRESH AIR INTK HDZ
	8	601360	1	HOSE INTAKE HDZ
	9	034272	5	NT .312-18 HX G5 ZNYC
	10	016253	3	CB .312-18X .750 FUL ZN
	11	036236	2	CS .312-18X1.000 HX G5
	12	775353	1	ENGINE CENTRIFICAL PREC
	13	794644	2	GM 1.50 X 2.12 X 1.75
2	706531	706531	1	GM 1.12X1.75X1.37X.12
	4	549394	1	PANEL W/A A/C MNT HDZ
	14	109341	1	SCREEN RS W/A HDZ
	15	791384	1	LATCH HEAVY DUTY SWELL
	16	785279	1	SAFETY AIR FILTER ELEMENT
	17	785261	1	MAIN AIR FILTER ELEMENT
	18	N/A	1	

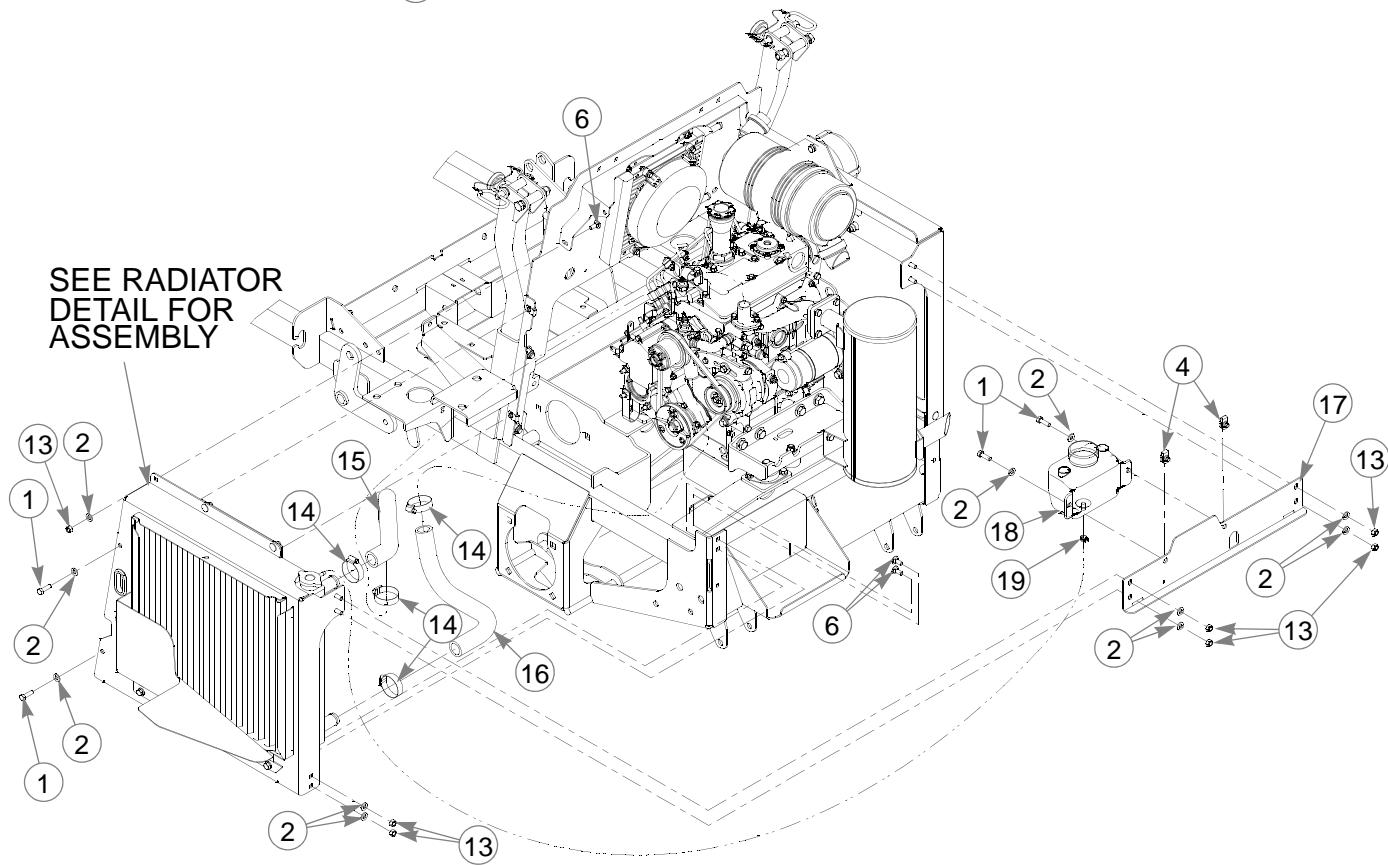
NOTES:

1. Orient the hose clamp on the air filter to engine hose so that it is accessible for maintenance (See FIG. 4 on page 10-4). Orient the precleaner cap with the vent notch facing downward and away from the operator (See FIG. 5 on page 10-4).
2. For tractors with serial numbers prior to 08070401, use 706531 (Grommet).
3. Includes Item 18 (785261 Main Filter Element). Item 17 (785279 Safety Element) must be ordered separately.
4. Service part includes decals. See "Tractor Decals" on page 9-2.

Cooling System Installation



SEE RADIATOR
DETAIL FOR
ASSEMBLY



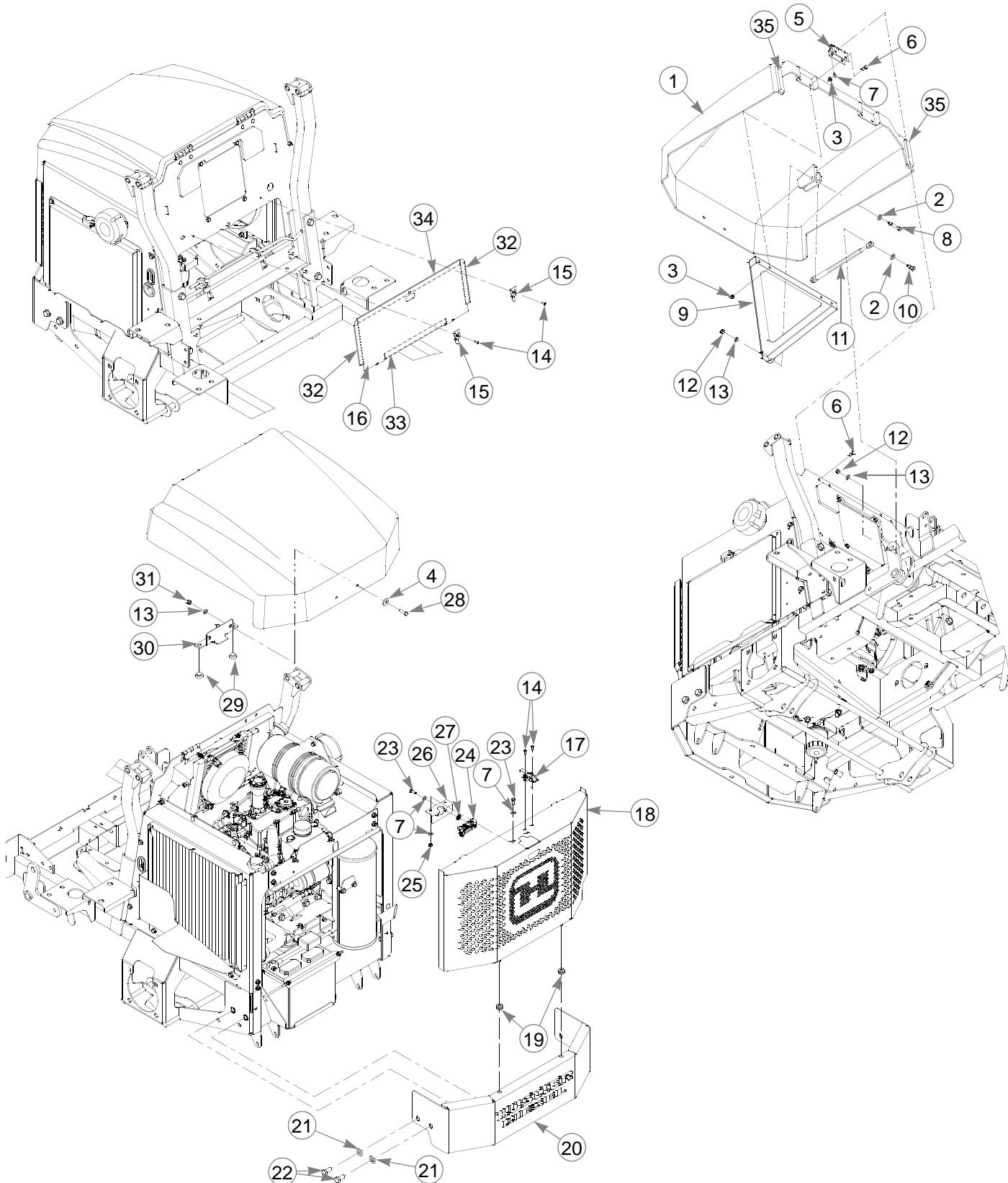
Cooling System Installation

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	036236	036236	6	CS .312-18X1.000 HX G5
2	768523	768523	21	FW .343X.687X.051/.080H
3	109559	109559	1	INNER PANEL FENDER
4	601069	601069	4	CN .312-18X.200 MAX THK
5	794644	794644	1	GM 1.50 X 2.12 X 1.75
3	706531	706531	1	GM 1.12X1.75X1.37X.12
6	016253	016253	7	CB .312-18X .750 FUL ZN
2	549360	109271	1	RAD SCREEN PANEL W/A HDZ
7	109137	109137	1	RADIATOR SCREEN W/A HDZ
8	601295	601295	1	RADIATOR HDZ
9	109144	109144	1	SHROUD W/A HDZ
10	068346	068346	4	CS .312-18X .500 HX G5
11	108977	108977	2	RAD MNT PLATE HDZ
12	034272	034272	11	NT .312-18 HX G5 ZNYC
13	713040	713040	4	HOSE CLAMP
14	601353	601353	1	UPPER RADIATOR HOSE
15	601354	601354	1	LOWER RADIATOR HOSE
2	549402	109073	1	HOOD SUPPORT
17	601358	601358	1	RADIATOR OVERFLOW BOTTLE
18	041483	041483	1	HOSE CLAMP
19	033035	033035	2	WEATHERSTRIP .12 X .75 X 1.5"
20	033035	033035	5	WEATHERSTRIP .12 X .75 X 16"
21	033035	033035	2	WEATHERSTRIP .12 X .75 X 15.5"
22	713198	713198	1	SEAL 3/8 X 3/4 X 14"
23	713198	713198	2	SEAL 3/8 X 3/4 X 1.25"
24	601558	601558	1	RADIATOR SUPPORT PAD
25	600320	N/A	1	RADIATOR CAP

NOTES:

1. Coolant capacity: 6.0 US quarts.
2. Service part includes decals. See "Tractor Decals" on page 9-2.
3. For tractors with serial numbers prior to 08070401, use 706531 (Grommet).

Engine Cover Installation

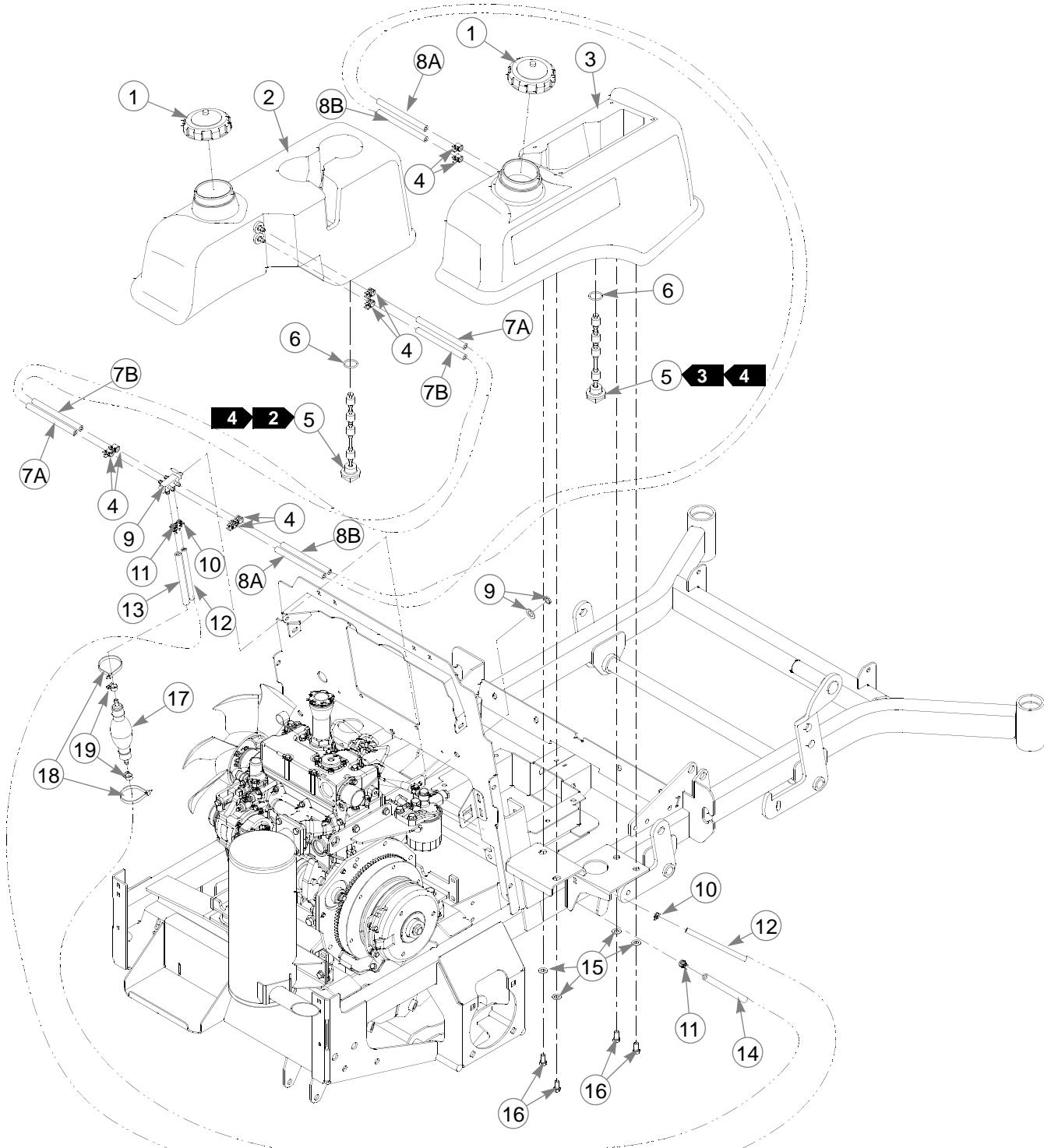


Engine Cover Installation

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	601363	601363	1	HOOD HDZ
2	767954	767954	2	FW .406X .812 X.060 SAE
3	068551	068551	8	NT .250-20 HXZY NL
4	712927	712927	2	FW .344X 1.00X.12 HRD Z
5	601364	601364	2	HINGE 3"X3" ZN W/ HOLES
6	601503	601503	8	CB .250-20 X .625 ZNYC
7	768515	768515	10	FW .281X.625X.051/.080H
8	601379	601379	1	SB .375 X 1.50SH .312-18
9	109745	109745	1	LIFT SUPPORT MOUNTING
10	063297	063297	1	SB .375X .500 SH .312-18
11	601564	601564	1	GAS SPRING HDZ HOOD
12	034272	034272	2	NT .312-18 HX G5 ZNYC
13	768523	768523	4	FW .343X.687X.051/.080H
14	601089	601089	4	RIVET .188 DIA BLK HD
15	010306	010306	2	LUDWIG SNAP FASTNER A-1
16	109136	109136	1	FIREWALL ACCESS PANEL
17	758821	758821	1	OVER CNTR CATCH W/LCK H
18	109413	109413	1	COVER REAR W/A HDZ
19	031666	031666	2	GM .31X.81X.56X.18
20	109105	109105	1	GUARD REAR ENGINE HDZ
21	767962	767962	4	FW .531X 1.063X.090 SAE
22	016527	016527	4	CS .500-13X1.00 HX G5 Z
23	055939	055939	4	CS .250-20X .750 HX G5
24	601373	601373	1	LATCH SLAM SOUTHCO
25	024927	024927	2	NT .250-20 HX GR.5 ZNYC
26	109721	109721	1	SOUTHCO LATCH BRACKET
27	029868	029868	2	LW .250 INT-EXT TOOTH Z
28	036236	036236	2	CS .312-18X1.000 HX G5
29	781880	781880	2	FW 1.312X 2.250X .160 P
30	109722	109722	1	LATCH STRIKER W/A
31	058776	058776	2	NT .312-18 HXZY NL
32	033035	033035	2	WEATHERSTRIP .12 X.75 X 6.25"
33	033035	033035	1	WEATHERSTRIP .12 X.75 X 11.88"
34	033035	033035	1	WEATHERSTRIP .12 X.75 X 19.88"
35	713198	713198	2	SEAL 3/8 X 3/4 X 4.5"

NOTES:

Fuel System



Fuel System

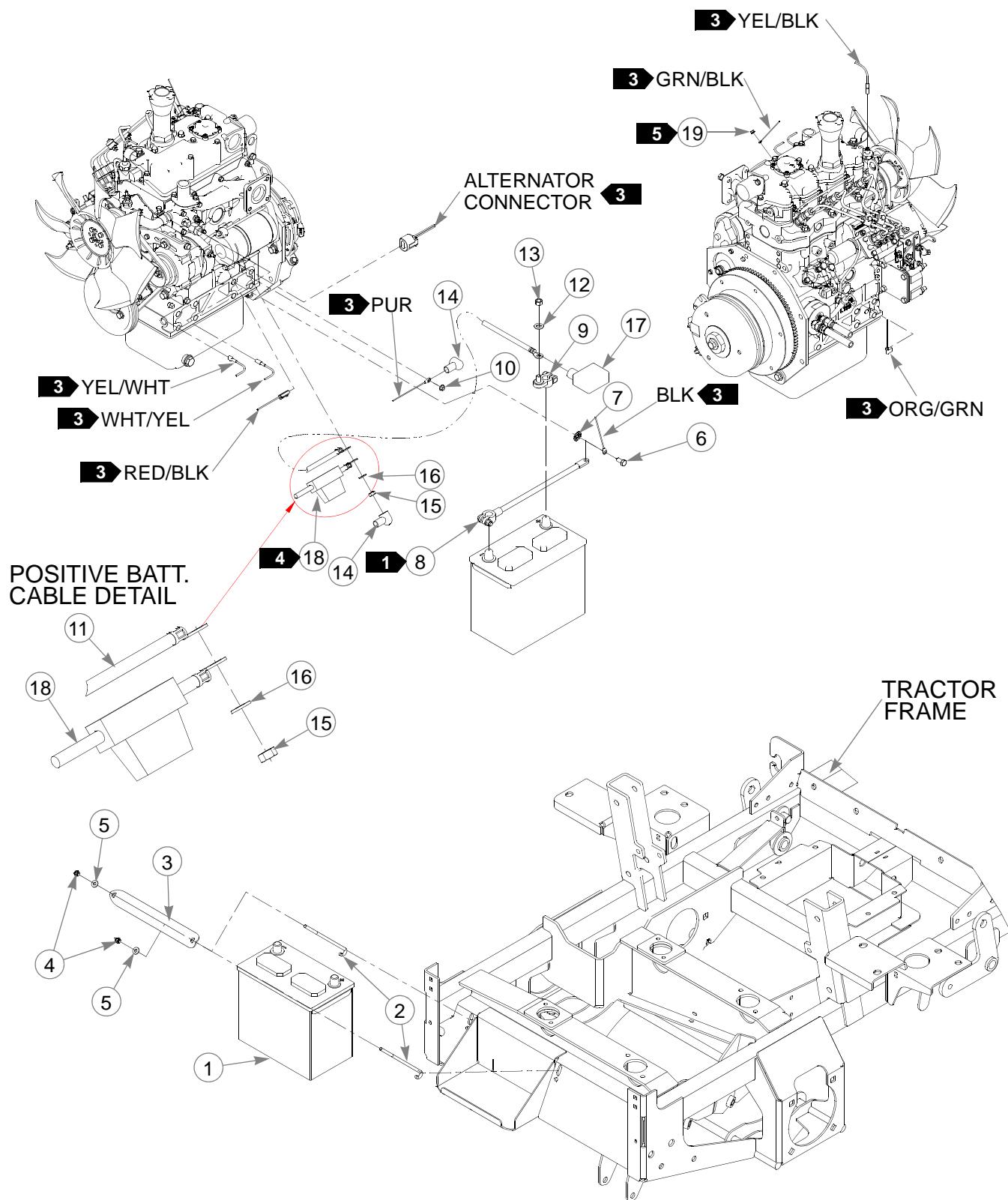
INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	798470	798470	2	3.5" YELLOW FUEL CAP
5 2	601699	601699	1	FUEL TANK LEFT SIDE HDZ
6	601366	601366	1	FUEL TANK LEFT SIDE HDZ
5 3	601698	601698	1	FUEL TANK RIGHT SIDE HDZ
6	601365	601365	1	FUEL TANK RIGHT SIDE HDZ
4	000323	000323	8	CLIP
5	601369	601369	2	FUEL LEVEL SENSOR HDZ
6	601375	601375	2	O-RING SAE-14 FUEL SENSOR
5 7A	015818	015818	1	FUEL LINE 24.5" (SUPPLY LINE)
6	015818	015818	1	FUEL LINE 31.5" (SUPPLY LINE)
5 7B	015818	015818	1	FUEL LINE 24.5" (RETURN LINE)
6	015818	015818	1	FUEL LINE 31.5" (RETURN LINE)
5 8A	015818	015818	1	FUEL LINE 9" (SUPPLY LINE)
6	015818	015818	1	FUEL LINE 16" (SUPPLY LINE)
5 8B	015818	015818	1	FUEL LINE 9" (RETURN LINE)
6	015818	015818	1	FUEL LINE 16" (RETURN LINE)
9	795542	795542	1	FUEL VALVE
10	041483	041483	2	HOSE CLAMP
11	041491	041491	2	HOSE CLAMP
12	038398	038398	1	FUEL HOSE 13" (RETURN FROM ENGINE TO VALVE)
13	791400	791400	1	FUEL LINE 12" (VALVE TO PRIMER BULB)
14	791400	791400	1	FUEL LINE 16" (PRIMER BULB TO FUEL PUMP)
15	767954	767954	8	FW .406X .812 X.060 SAE
16	055822	055822	8	CS .375-16X .750 HX G5
17	601378	601378	1	FUEL PRIMER BULB 5/16" ENDS
18	060889	060889	3	WIRE TIE BIG/LONG
19	601693	601693	2	HOSE CLAMP 1/4" - 5/8"

NOTES:

1. Includes Item 6 (601375 O-Ring).
2. Left side fuel sensor terminal of wire harness connects here.
3. Right side fuel sensor terminal of wire harness connects here.
4. Torque to 20 ft-lbs.
5. Used on tractors with serial numbers higher than 08070401.
6. Used on tractors with serial numbers prior to 08070401.
7. Service parts for fuel tanks (not shown):

SERVICE PART NO. FOR S/N PRIOR TO 08070401	SERVICE PART NO. FOR S/N HIGHER THAN 08070401	DESCRIPTION
785295	785295	FLANGE GROMMET
601532	601695	RETURN HOSE ASSY 12.0
601529	601694	SUCTION HOSE ASSY 26.5
792986	N/A	1/4 X 1/4 ELBOW FITTING

Battery and Electrical Connections



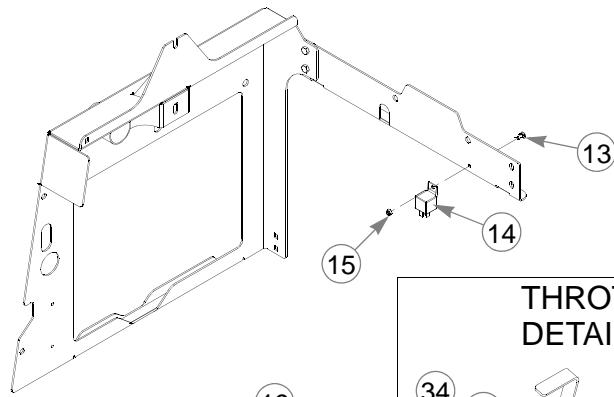
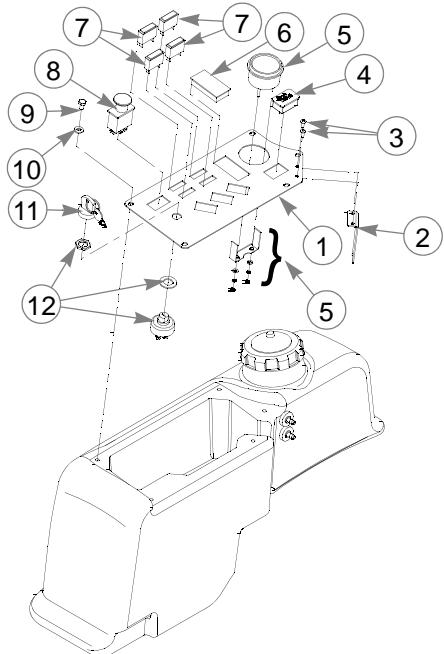
Battery and Electrical Connections

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
2	1	601291	601291	1 BATTERY GRP 45 480CCA
	2	793489	793489	2 BATTERY CLAMP ROD
	3	109108	109108	1 BATTERY HOLDDOWN CLAMP
	4	068551	068551	2 NT .250-20 HXZY NL
	5	768515	768515	2 FW .281X.625X.051/.080H
	6	053678	053678	1 CS M 8-1.25X16 HX G8.8
	7	029876	029876	1 LW .312 INT-EXT TOOTH Z
	8	601540	601540	1 NEG 12" POST/STUD CABLE
	9	601380	601380	1 POS BAT MARINE POST
	10	005231	005231	1 NT M6-1.0-10 HX FLG ZN
	11	601539	601539	1 POS CABLE 9"
	12	767954	767954	1 FW .406X .812 X.060 SAE
	13	054502	054502	1 NT .375-16 HX GRD 5 ZNY
	14	601319	601319	2 POS. BATTERY CABLE BOOT
	15	045336	045336	1 NT M8X1.25 HX GR8.8 ZNY
	16	768523	768523	1 FW .343X.687X.051/.080H
	17	601381	601381	1 POSITIVE BATTERY BOOT
	18	601367	N/A	1 WIRE HARNESS
	19	023100004	N/A	1 FLANGE NUT

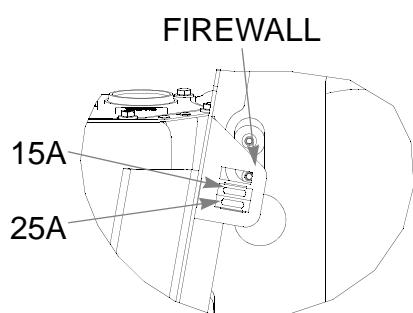
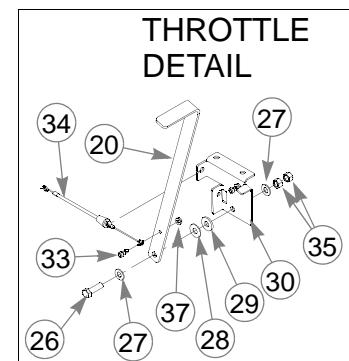
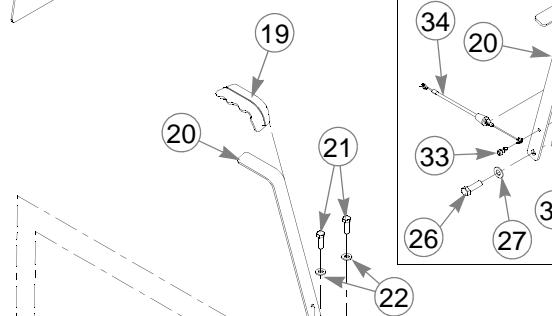
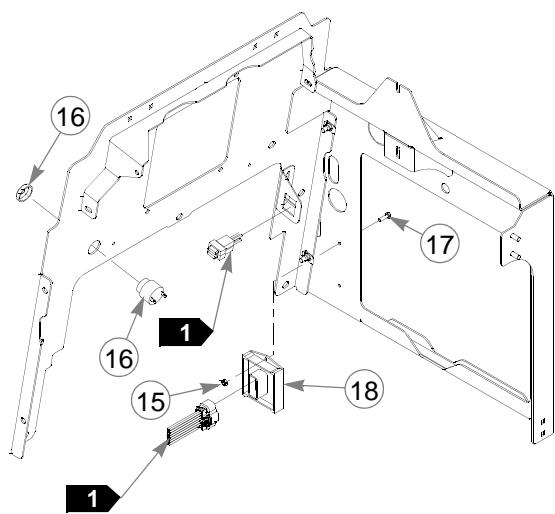
NOTES:

1. When performing service on mower, disconnect battery ground cable and do not reconnect to battery until engine is ready to be started. See Owners Manual.
2. Battery is not installed in export models.
3. Part of wire harness.
4. Includes 50 amp master fuse.
5. Hardware comes with engine.
6. See "Wire harness and cable routings" on page 10-4.

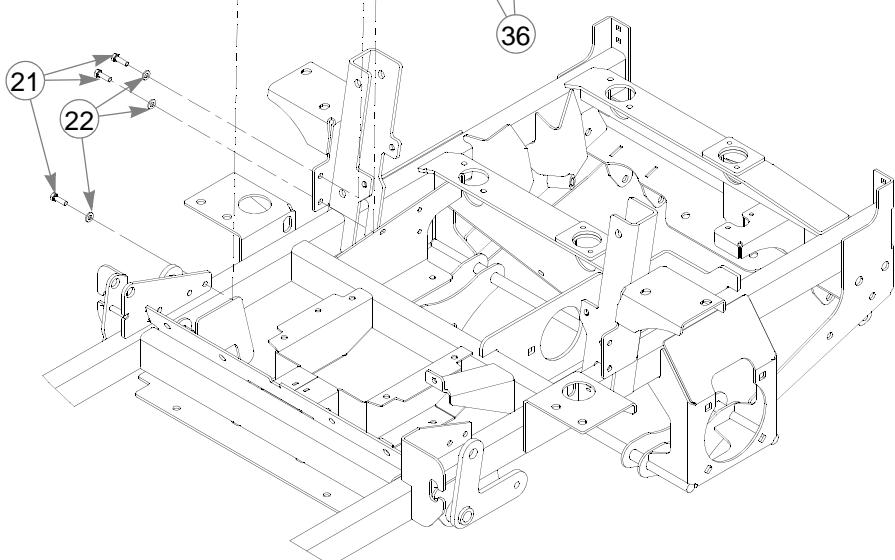
Instrument Panel



THROTTLE
DETAIL



FUSE SIZE &
LOCATION



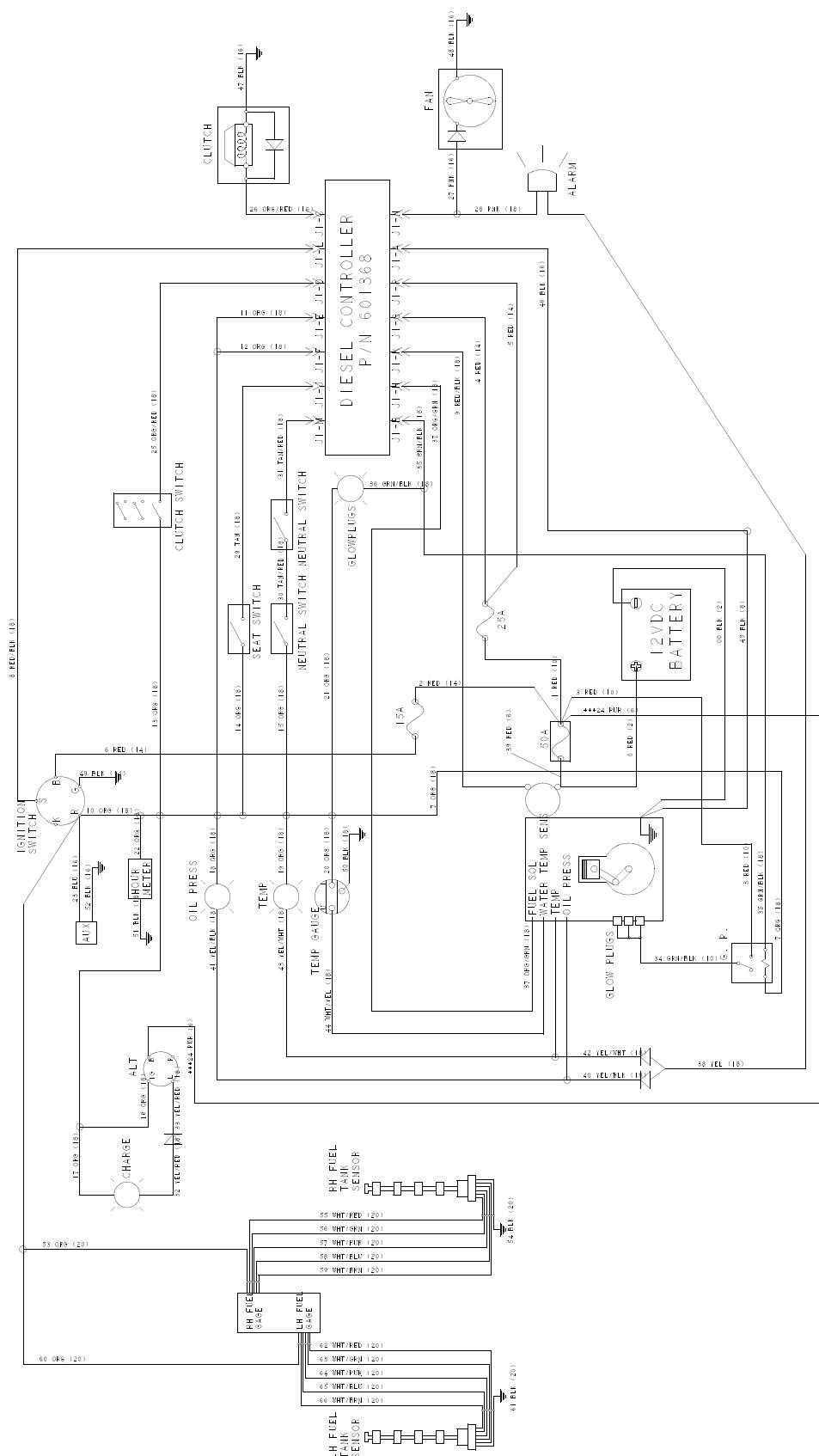
Instrument Panel

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	109557	109557	1	INSTRUMENT PANEL HDZ
2	109729	109729	1	FUEL TANK COVER HDZ
3	601089	601089	2	RIVET .188 DIA BLK HD
4	769166	769166	1	HOUR METER
5	385710011	N/A	1	TEMPERATURE GAUGE HDZ
6	601370	601370	1	FUEL GAUGE DUAL TANK HDZ
7	712257	712257	4	RED INDICATOR LIGHT
8	776476	776476	1	PTO SWITCH 6201-321
9	055947	055947	5	CS .250-20X .500 HX G5
10	768515	768515	5	FW .281X.625X.051/.080H
11	785808	785808	1	KEY ASSEMBLY
12	045898	045898	1	IGN SWITCH INDAK
13	601098	601098	1	CB 10-24 X .500 ZYNC
14	601053	N/A	1	SEALED RELAY W/BRACKET
15	059832	059832	1	NT #10-24 HX NL ZN
16	794347	794347	1	ULTRA LOUD WARBLE ALARM
17	063198	063198	2	CS 10-24X .750 HXFLK ZN
18	601368	601368	1	CONTROLLER HDZ S773L
19	601371	601371	1	GRIP RED 3/16X1 BAR HDZ
20	109420	109420	1	THROTTLE LEVER HDZ
21	036236	036236	8	CS .312-18X1.000 HX G5
22	768523	768523	10	FW .343X.687X.051/.080H
23	601069	601069	6	CN .312-18X.200 MAX THK
24	549378	109530	1	SEAT PAN COVER RH SIDE
25	549386	109531	1	SEAT PAN COVER LH SIDE
26	052860	052860	1	CS .375-16X1.250 HX G5
27	767954	767954	2	FW .406X .812 X.060 SAE
28	601507	601507	1	FW .406X1.000X.06 NYLON
29	712919	712919	1	FW .406X 1.00X.12 HRD Z
30	109421	109421	1	THROTTLE LEVER PLATE
31	016816	016816	2	NT .250-20 HX FL LK ZNY
32	056077	056077	1	CS .250-20X1.000 HX G5
33	601493	601493	1	SB .250DX.250L 10-24 ZN
34	601362	601362	1	THROTTLE CABLE HDZ
35	054502	054502	2	NT .375-16 HX GRD 5 ZNY
36	034272	034272	2	NT .312-18 HX G5 ZNYC
37	016774	016774	1	NT #10-24 HXFLK ZN

NOTES:

1. Part of wire harness (601367).
2. For wire harness connections see "Instrument panel and wire connections (FIG. 1)." on page 10-3.
3. Service part includes decals. See "Tractor Decals" on page 9-2.

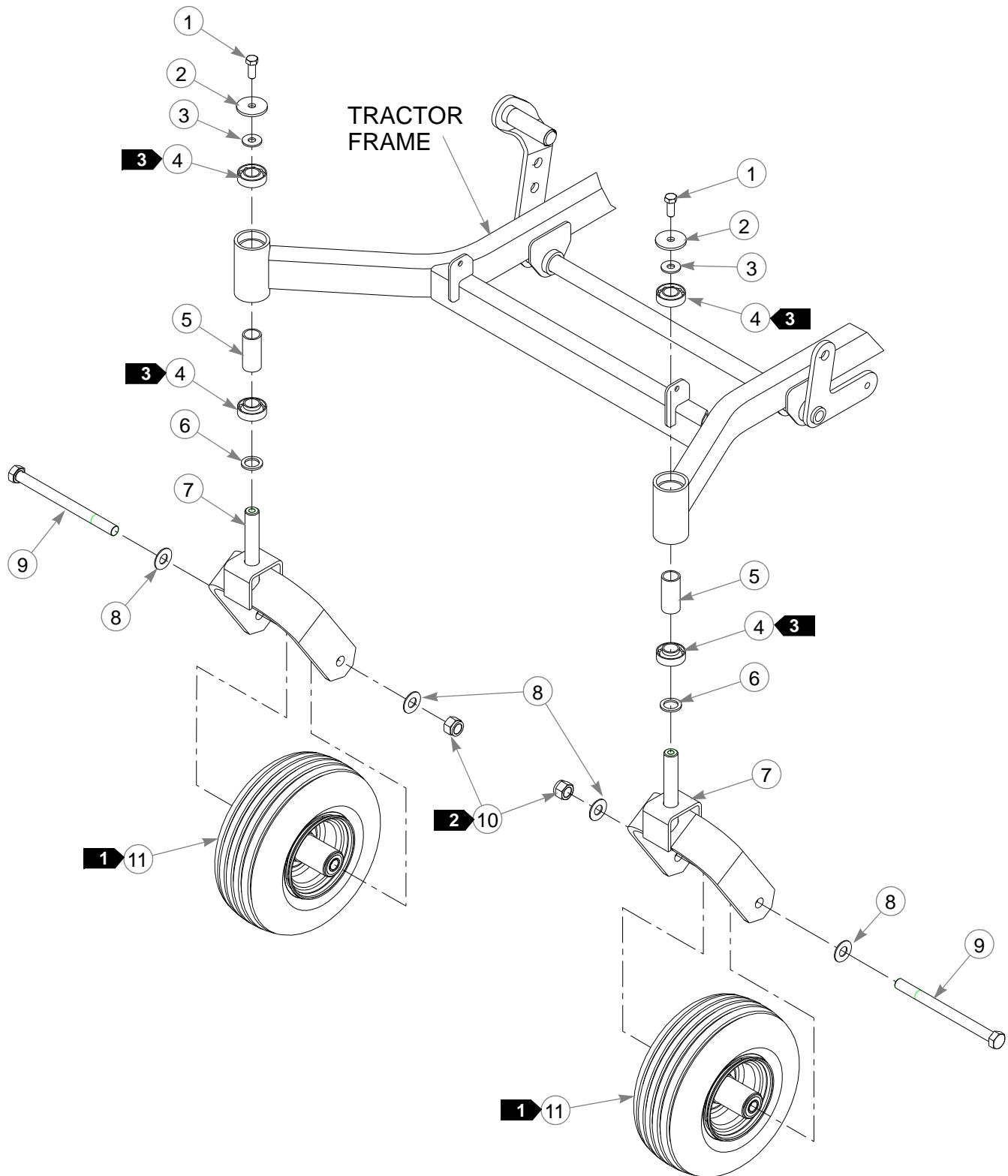
Electrical Schematic—601367



Chapter 6 Contents

Front Wheel Assembly	6-2
Front Wheel Breakdown—747782	6-4
Optional Semi-Pneumatic Tire/Wheel—789537	6-5
Drive Wheel Assembly Installation	6-6
Anti-Rollover Wheel Assembly	6-7

Front Wheel Assembly



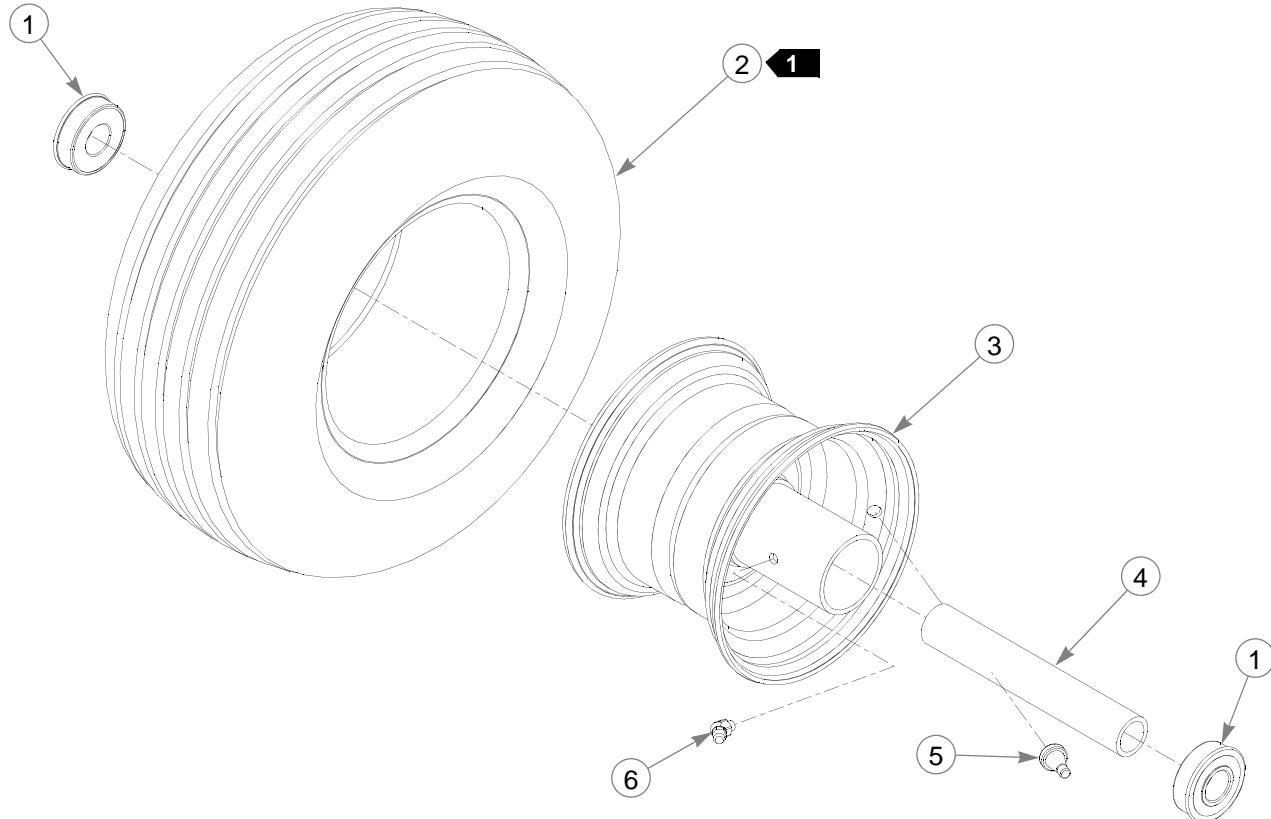
Front Wheel Assembly

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	705954	705954	2	CS .500-13X1.25 HX G5 Z
2	344267	344267	2	FW .510X 2.15X.187 SPL
3	712967	712976	2	FW .531X 1.375X.125 ZNY
4	784223	784223	4	BEARING W/O COLLAR
5	387035	387035	2	SPACER, 1.07 X 1.312 X 2.793
6	045765	045765	2	FW 1.030X 1.500X.134 ZN
7	349266	349266	2	FORK
8	025296	025296	4	FW .760X 1.625X.08 ZNYC
9	041475	041475	2	CS .750-10X9.50 HXZY
10	061101	061101	2	NT .750-10 HXZY NL
11	747782	747782	2	WHEEL & TIRE ASSY
12	789537	N/A	2	OPTIONAL SEMI-PNEUMATIC WHEEL/TIRE ASSEMBLY

NOTES:

1. Apply grease to zerks.
2. Torque to 100 ft.-lbs.
3. Assemble with extended inner race toward item 5 (387035 Spacer, 1.07 x 1.312 x 2.793).

Front Wheel Breakdown—747782

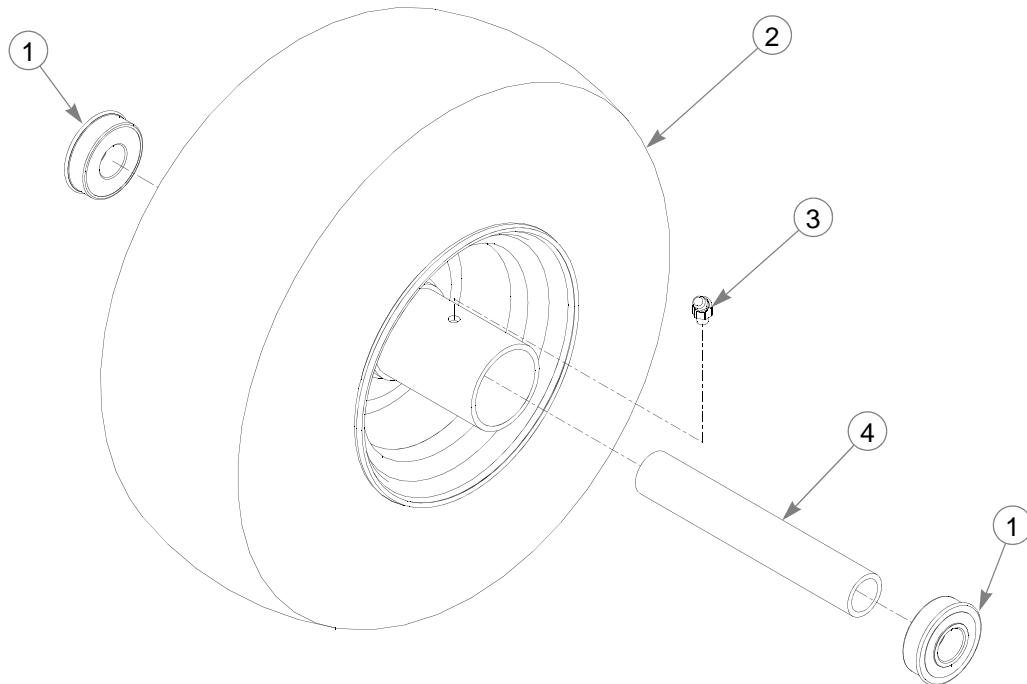


ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY	DESCRIPTION
1	039677	N/A	2	WHEEL BEARING
2	747741	N/A	1	13 X 6.50 TIRE
3	747832	N/A	1	6 X 4.5 WHEEL
4	782771	N/A	1	BEARING SPACER
5	019521	N/A	1	TIRE VALVE
6	015511	N/A	1	GREASE FITTING 45 DEG 1/4

NOTES:

1. Inflate tire to 8-12 psi.

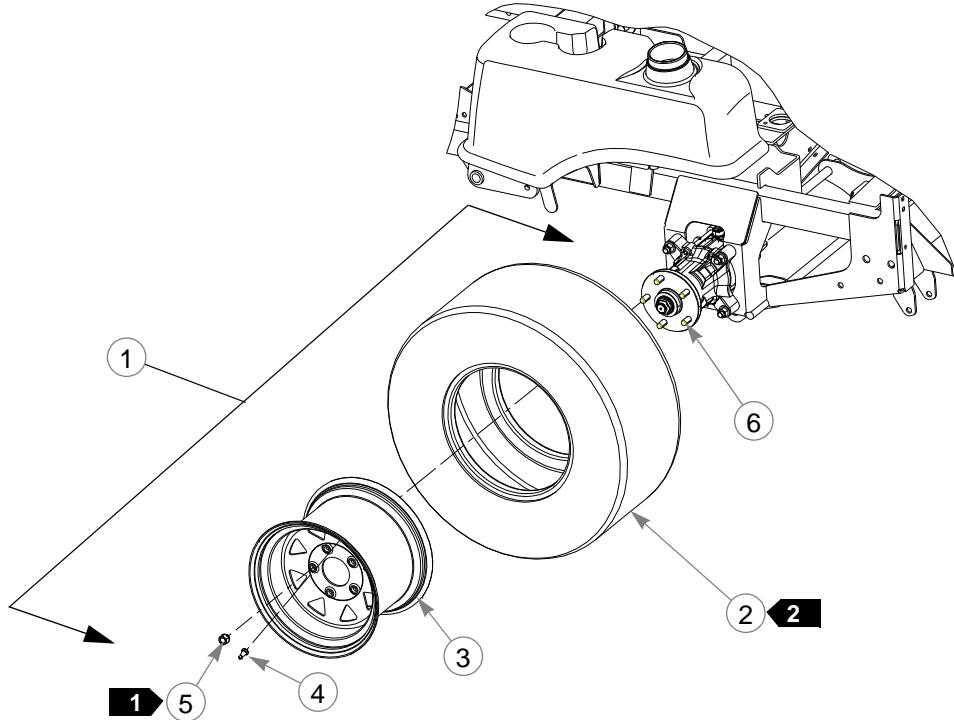
Optional Semi-Pneumatic Tire/Wheel—789537



ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY	DESCRIPTION
1	039677	N/A	2	WHEEL BEARING
2	789537	N/A	1	TIRE/WHEEL ASSEMBLY
3	015511	N/A	1	GREASE FITTING 45 DEG 1/4
4	782771	N/A	1	BEARING SPACER

NOTES:

Drive Wheel Assembly Installation

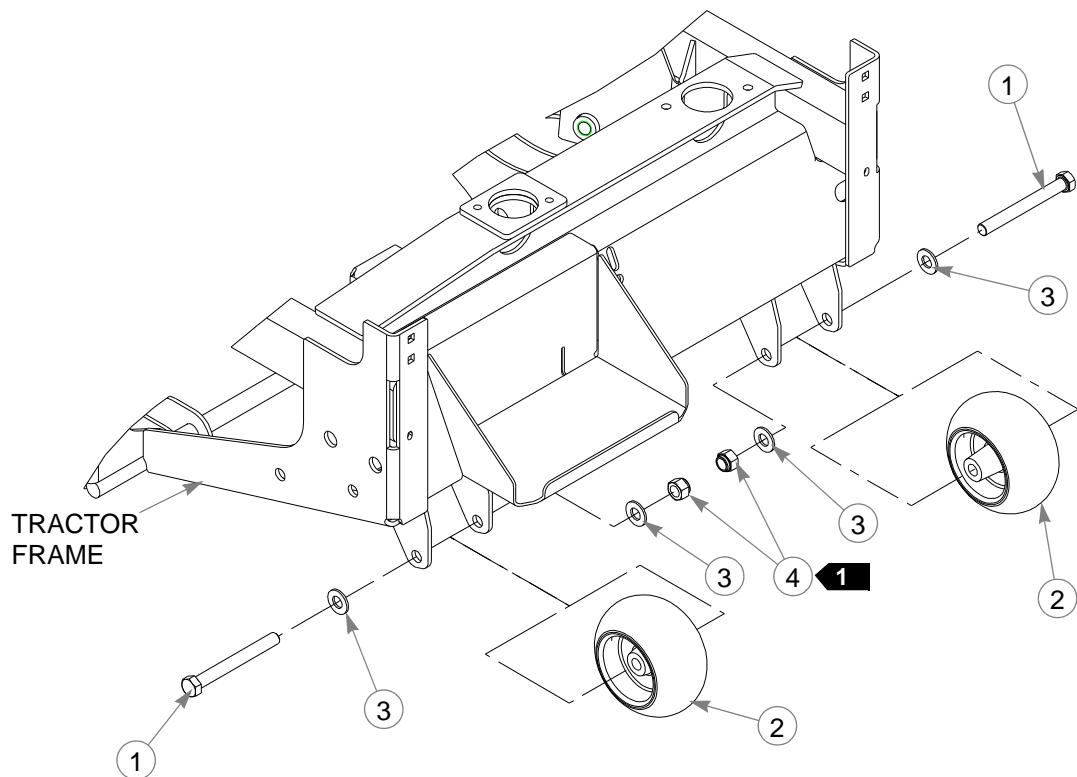


ITEM NO.	SERVICE PART NO.	PART NO.	QTY	DESCRIPTION
1	601238	601238	2	WHEEL & TIRE ASSY FOR SD 60", 66" & 72" & 54" RD (QTY PER TRACTOR)
2	781245	N/A		TIRE, 12 X 12 X 24 FOR SD 60", 66" & 72" & 54" RD
3	796250	N/A		WHEEL ASSEMBLY 12 X 8.50 FOR SD 60", 66" & 72" & 54" RD
4	019521	N/A		TIRE VALVE
5	061077	061077	10	WHEEL NUT (QTY PER TRACTOR)
6	770859	N/A	10	1/2" WHEEL LUG STUD
1	782078	782078	2	WHEEL & TIRE ASSY FOR 54" SD (QTY PER TRACTOR)
2	782284	NA		TIRE 23 X 9.50-12 FOR 54" SD
3	782086	N/A		WHEEL ASSEMBLY 12 X 7.00 FOR 54" SD
4	019521	N/A		TIRE VALVE
5	061077	061077	10	WHEEL NUT (QTY PER TRACTOR)
6	770859	N/A	10	1/2" WHEEL LUG STUD
1	784058	784058	2	WHEEL & TIRE ASSY FOR 72" & 60" RD (QTY PER TRACTOR)
2	781245	NA		TIRE 24 X 12 X 12 FOR 72" & 60" RD
3	784066	N/A		WHEEL ASSEMBLY 12 X 8.50 FOR 72" & 60" RD
4	019521	N/A		TIRE VALVE
5	061077	061077	10	WHEEL NUT (QTY PER TRACTOR)
6	770859	N/A	10	1/2" WHEEL LUG STUD

NOTES:

1. Torque to 65-75 ft. lbs.
2. Inflate tire to 8-12 psi.

Anti-Rollover Wheel Assembly



ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY	DESCRIPTION
1	068239	068239	2	CS .500-13 X 4.500 HX G5 ZN
2	031997	031997	2	ANTI-SCALP WHEEL
3	767962	767962	4	FW .531 X 1.063 X .090 SAE HD ZN
4	781567	781567	2	NT .500-13 HX G8 ZY NL

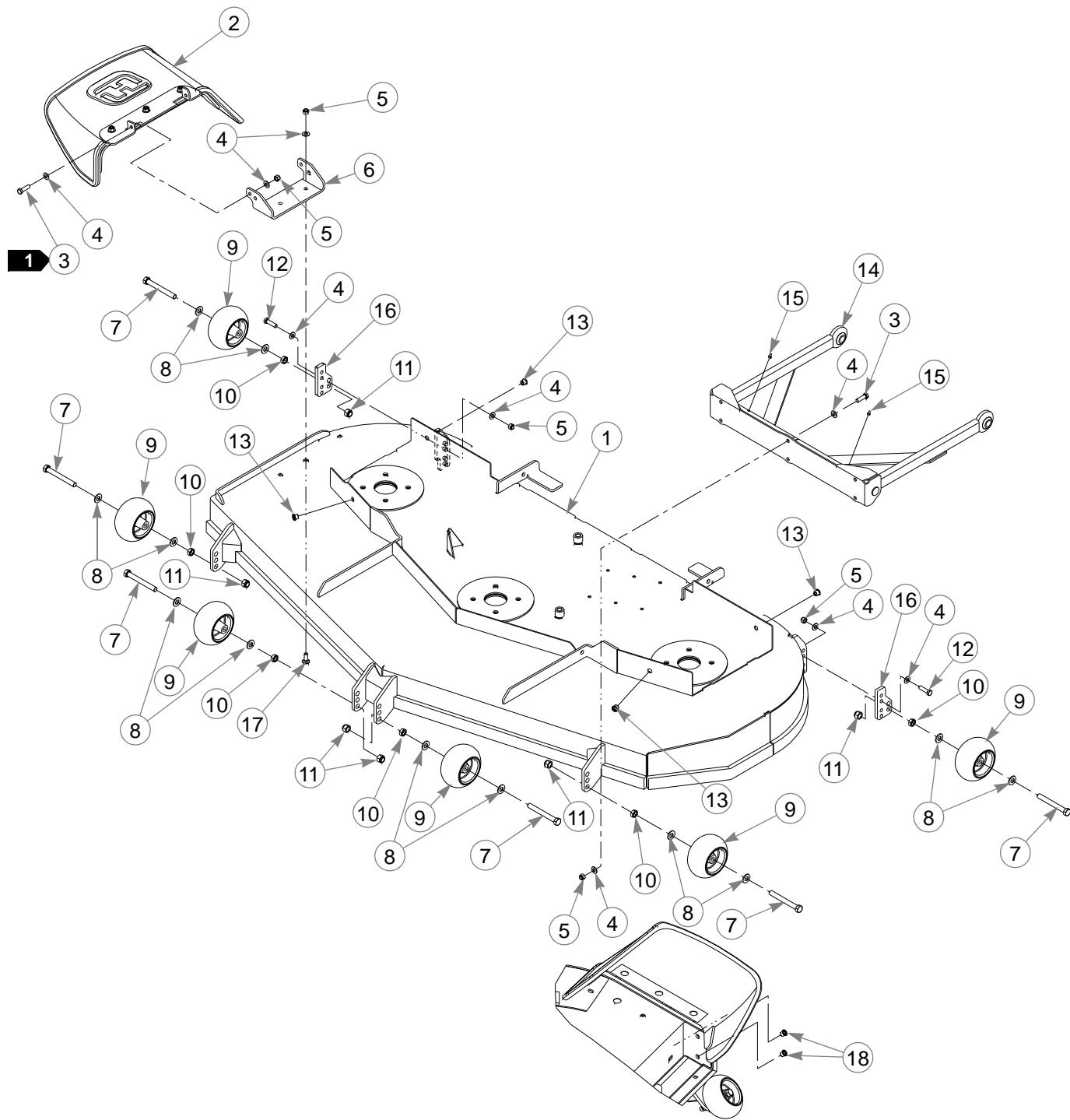
NOTES:

1. Do not torque, wheel must turn freely.

Chapter 7 Contents

72" Side Discharge XR7 Deck Assembly	7-2
72" Side Discharge XR7 Deck Pulley Assembly	7-4
66" Side Discharge XR7 Deck Assembly	7-6
66" Side Discharge XR7 Deck Pulley Assembly	7-8
60" Side Discharge XR7 Deck Assembly	7-10
60" Side Discharge XR7 Deck Pulley Assembly	7-12
54" Side Discharge XR7 Deck Assembly	7-14
54" Side Discharge XR7 Deck Pulley Assembly	7-16
Side Discharge Deck—"A" Adaptors	7-18
Side Discharge Deck—"B" Adaptors	7-20
72" Rear Discharge Deck Assembly	7-22
72" Rear Discharge Deck Pulley Assembly	7-24
60" Rear Discharge Deck Assembly	7-26
60" Rear Discharge Deck Pulley Assembly	7-28
54" Rear Discharge Deck Assembly	7-30
54" Rear Discharge Deck Pulley Assembly	7-32
Spindle Assembly—796235X	7-34
Spindle Assembly—796680X	7-35

72" Side Discharge XR7 Deck Assembly



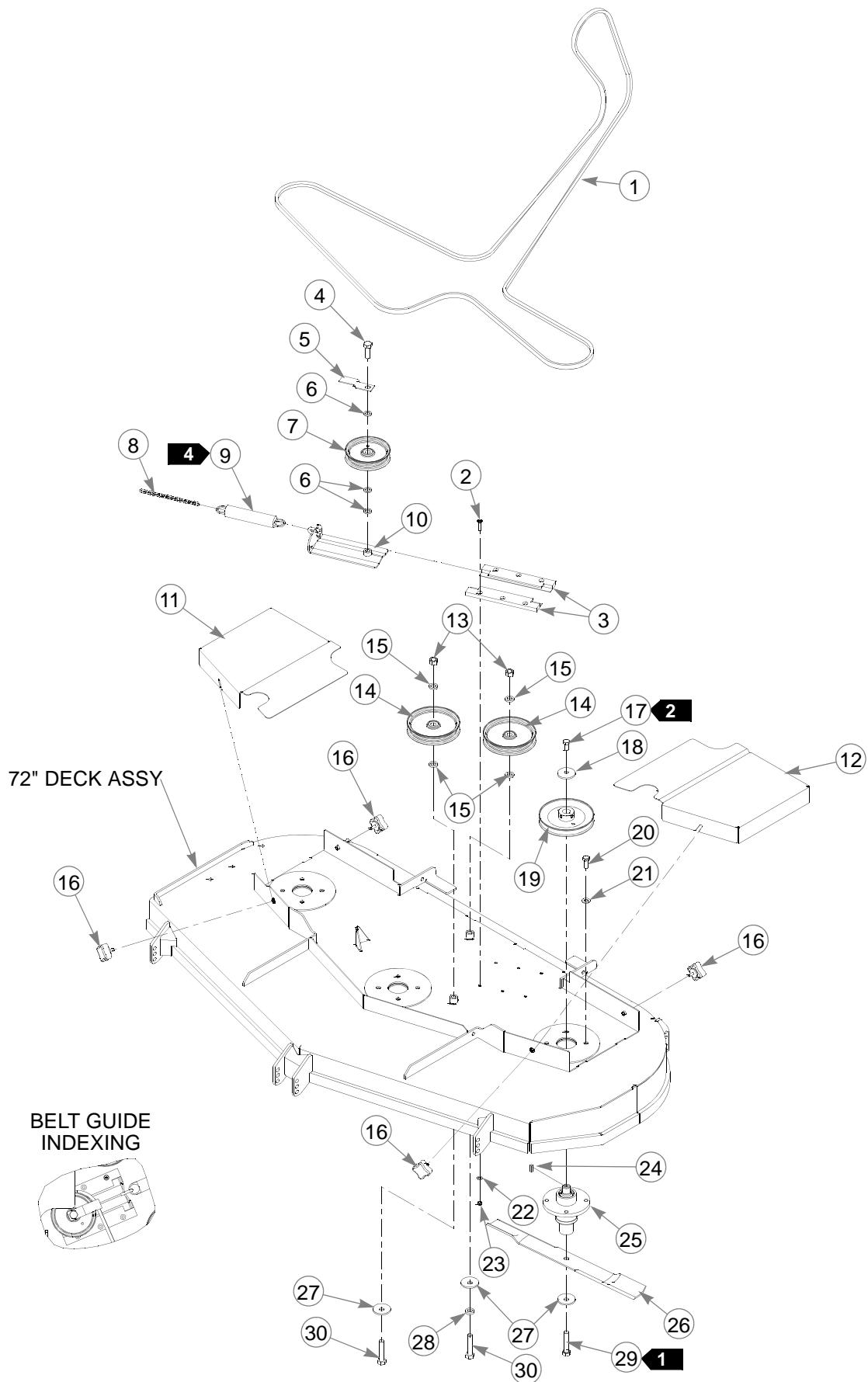
72" Side Discharge XR7 Deck Assembly

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY	DESCRIPTION
3 ➤ 1	549170	108649	1	72" DECK WA CRATED
2	798694	798694	1	RUBBER CHUTE ASSEMBLY
3	052860	052860	8	CS .375-19 X 1.250 HX G5 ZN
4	767954	767954	26	FW .406 X .812 .060 SAE HD ZN
5	086660	086660	14	NT .375-16 HXZY NL
6	103010	103010	1	DISCHARGE CHUTE MOUNT BRACKET
7	781708	N/A	6	CS .500-13 X 4.25 HX G5 ZN
8	767962	N/A	12	FW .531 X 1.063 X .090 SAE HD ZN
9	031997	N/A	6	ANTI-SCALP WHEEL
10	053199	N/A	6	NT .500-13 HX JAM ZN
11	781567	781567	6	NT .500-13 HX G8 ZY NL
12	005116	005116	4	CS .375-16X1.375 HX G5
13	N/A	808485	4	5/16-18 THREAD RIVET NUT
14	314104	314104	1	PUSHER
15	015495	015495	2	STRAIGHT GREASE FITTING
16	103184	103184	2	REAR ANTI-SCALP BRACKET
17	025395	025395	2	CB .375-16 X 1.00 STD CD
18	N/A	808493	2	3/8-16 THREAD RIVET NUT
2 ➤	788166	788166	6	ANTI SCALP WHEEL ASSY

NOTES:

1. Do not torque, Item 2 (798694 Discharge Chute) must pivot freely.
2. Includes items 7, 8, 9, and 10.
3. Service part deck includes decals (see "72" Side Discharge XR7 Deck Decals" on page 9-4 for listing of decals).

72" Side Discharge XR7 Deck Pulley Assembly



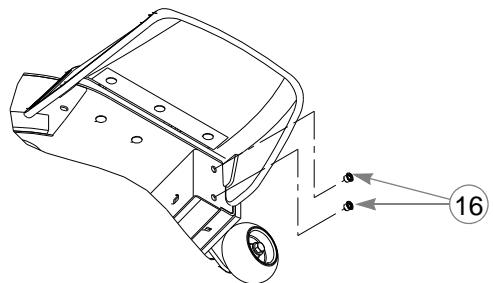
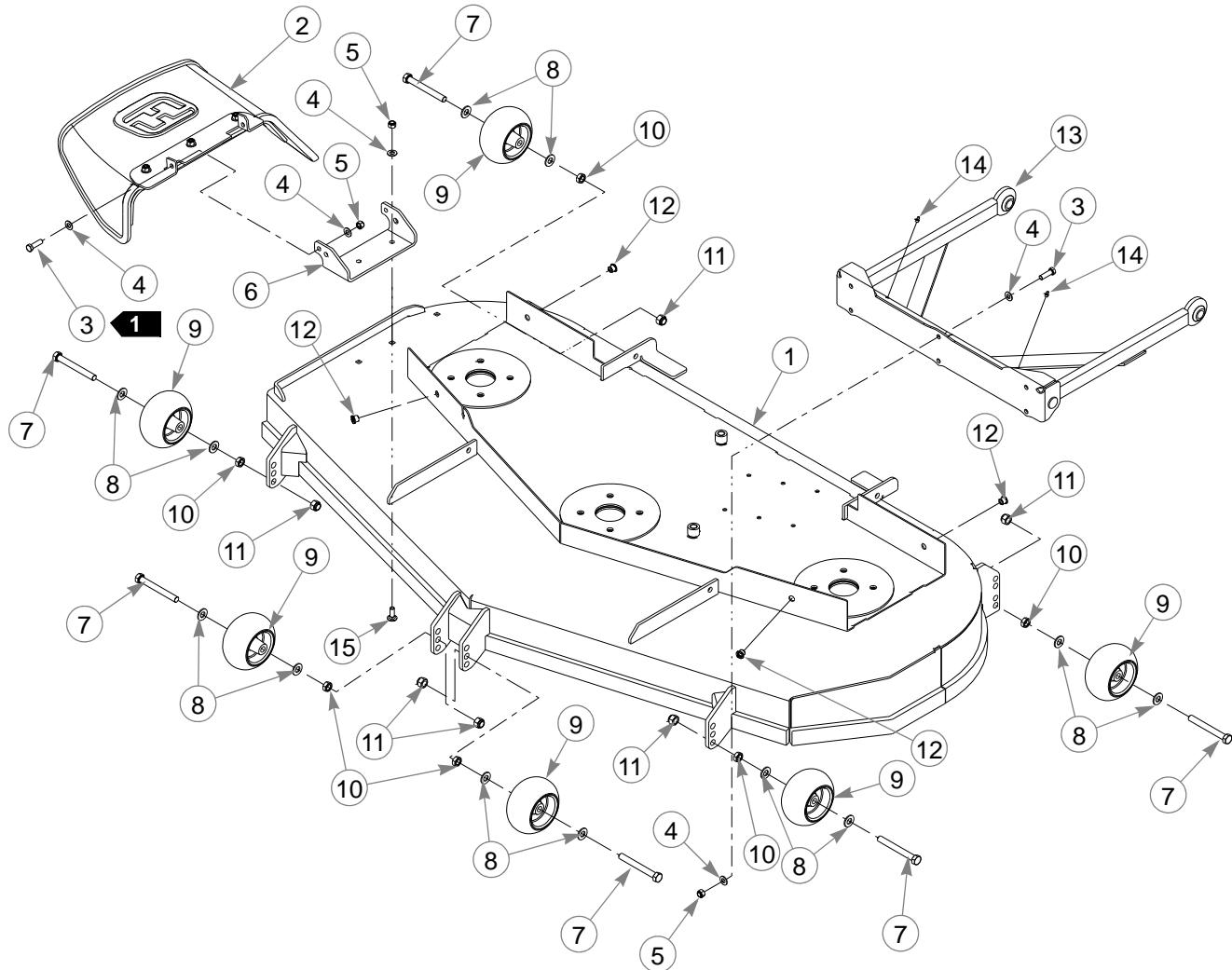
72" Side Discharge XR7 Deck Pulley Assembly

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY	DESCRIPTION
1	601531	601531	1	B-SECTION BELT
2	797910	797910	6	CS .312-18 X 1.50 FLT SH ZNYC
3	601434	601434	2	UHMW IDLER SLIDE
4	025007	025007	1	CS .625-11 X 1.75 HX G5 ZNYC
5	347443	347443	1	DECK BELT IDLER GUIDE
6	028118	028118	3	FW .62 X 1.00X.134 ZN
7	781856	781856	1	5.00" IDLER PULLEY
8	259812	059931	1	CHAIN DECK LIFT SPRING (13 LINKS)
9	781302	781302	1	IDLER SPRING
10	350884	350884	1	DECK IDLER
11	107620	107620	1	RS PULLEY COVER 72" XR7
12	107621	107621	1	LS PULLEY COVER 72" XR7
13	016972	016972	2	NT .625-11 HX G5 ZNYC
14	781385	781385	2	6.00" IDLER PULLEY
15	797449	797449	4	FW .650X1.125X.18 ZNYCG5
16	792002	792002	4	5/16-18 X 3/4"MALE KNOB
17	016527	016527	3	CS .500-13 X 1.00 HX G5 ZN
18	752386	752386	3	CW .515X 2.25X .204 ZN
19	538850	538850	3	DRIVE PULLEY DB-112
20	705954	705954	12	CS .500-13 X 1.25 HX G5 ZNYC
21	767962	767962	12	FW .531 X 1.063 X .090 SAE HD ZN
22	768523	768523	6	FW .343 X .687 X .051/.080 HD ZN
23	058776	058776	6	NT .312-18 HXZY NL
24	212472	212472	3	KEY 1/4 SQ X 1.00 LONG
25	796235X	796235	3	SPINDLE HOUSING ASSEMBLY
26	798702	798702	3	BLADE, F24.50"-H-F-CW
27	782474	782474	5	CW .631 2.250 X .187 PNT
28	769257	769257	1	FW .656X 1.250X.250 ZNYC
29	029934	029934	3	CS .625-11 X 3.00 HX G5 ZNYC
30	783738	783738	2	CS .625-11 X 3.00 FULL HX G5 ZN

NOTES:

1. Torque to 118 ft. lbs.
2. Torque to 67-75 ft. lbs.
3. Apply grease to zerk (see owner's manual).
4. See "72", 66" & 54" Side Disch. Deck Belt Routing/Tensioning" on page 8-6 for belt tensioning.
5. See "Spindle Assembly—796235X" on page 7-34 for breakdown.

66" Side Discharge XR7 Deck Assembly



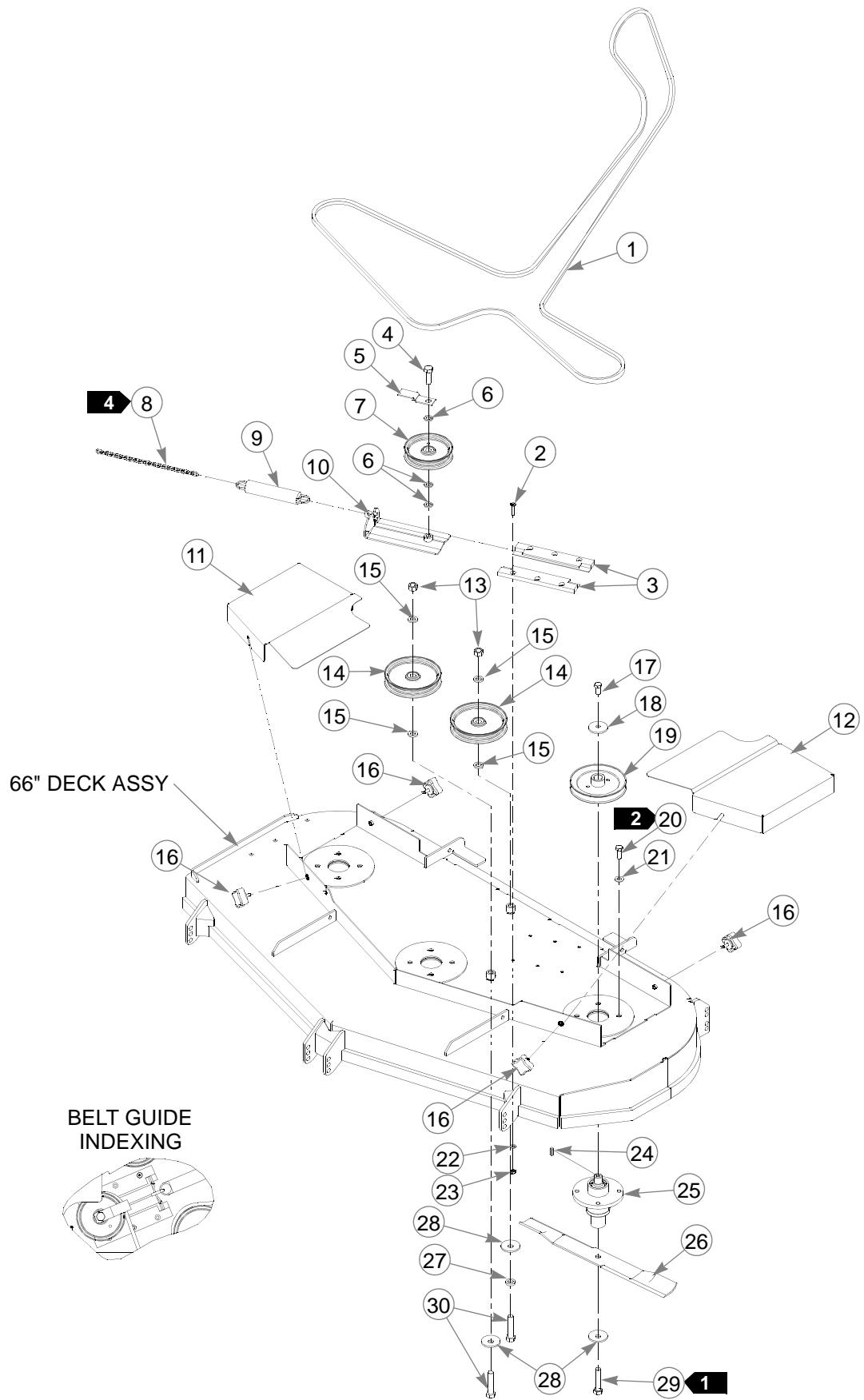
66" Side Discharge XR7 Deck Assembly

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY	DESCRIPTION
3 1	549162	108536	1	66" DECK W/A CRATED
2	798694	798694	1	RUBBER CHUTE ASSEMBLY
3	052860	052860	8	CS .375-16 X 1.250 HX G5 ZN
4	767954	767954	18	FW .406 X .812 .060 SAE HD ZN
5	086660	086660	10	NT .375-16 HXZY NL
6	103010	103010	1	DISCHARGE CHUTE MOUNT BRACKET
7	781708	N/A	6	CS .500-13 X 4.25 HX G5 ZN
8	767962	N/A	12	FW .531 X 1.063 X .090 SAE HD ZN
9	031997	N/A	6	ANTI-SCALP WHEEL
10	053199	N/A	6	NT .500-13 HX JAM ZN
11	781567	781567	6	NT .500-13 HX G8 ZY NL
12	808485	808485	4	5/16-18 THREAD RIVET NUT
13	314104	314104	1	PUSHER
14	015495	015495	2	STRAIGHT GREASE FITTING
15	025395	025395	2	CB .375-16 X 1.00 STD CD
16	808493	808493	2	3/8-16 THREAD RIVET NUT
2	788166	788166	6	ANTI SCALP WHEEL ASSY

NOTES:

1. Do not torque, Item 2 (798694 Discharge Chute) must pivot freely.
2. Includes items 7, 8, 9, and 10.
3. Service part deck includes decals (see "66" Side Discharge XR7 Deck Decals" on page 9-5 for listing of decals).

66" Side Discharge XR7 Deck Pulley Assembly



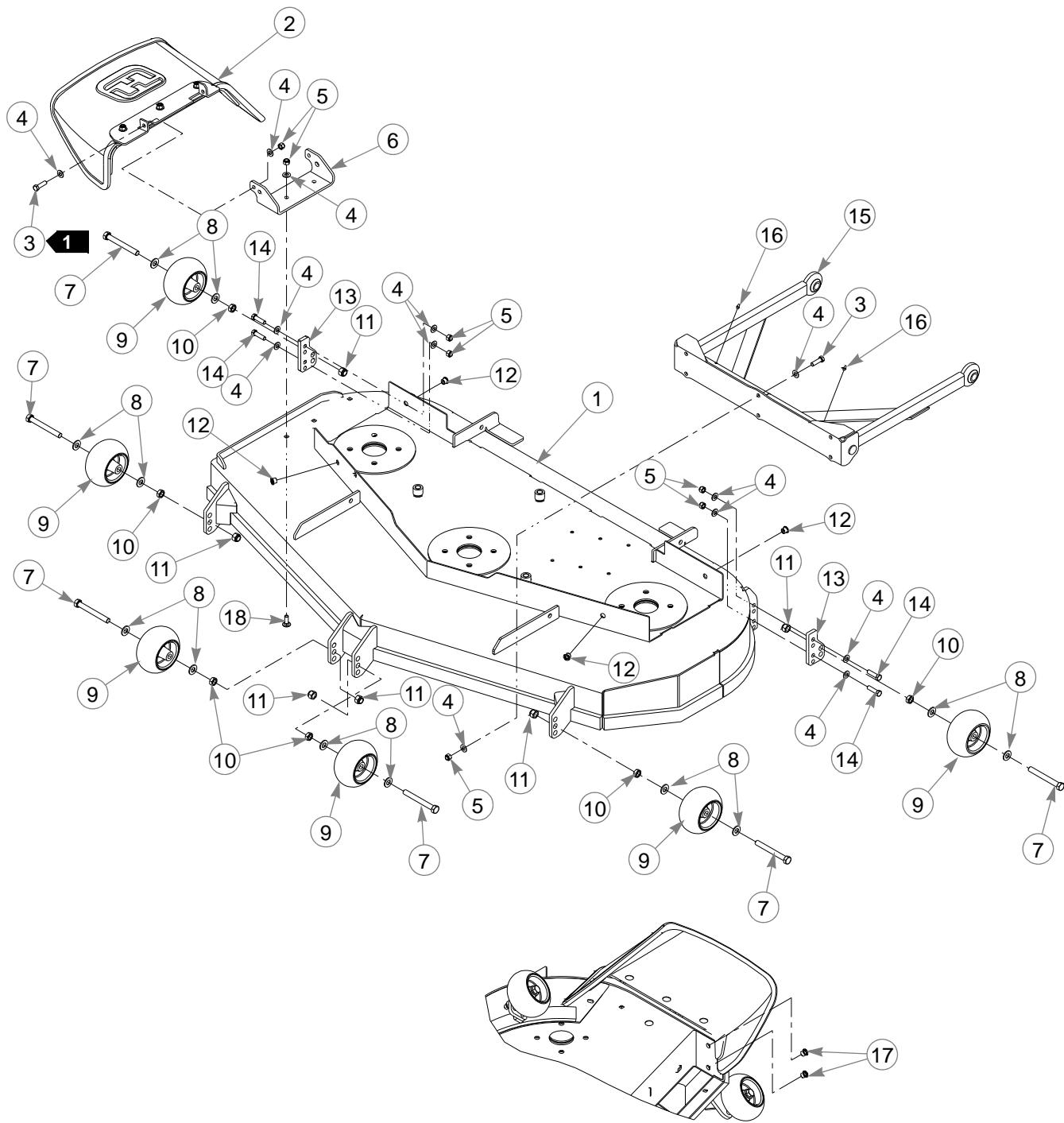
66" Side Discharge XR7 Deck Pulley Assembly

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY	DESCRIPTION
1	601528	601528	1	B-SECTION BELT
2	797910	797910	6	CS .312-18 X 1.50 FLT SH ZNYC
3	601434	601434	2	UHMW IDLER SLIDE
4	025007	025007	1	CS .625-11 X 1.75 HX G5 ZNYC
5	347443	347443	1	DECK BELT IDLER GUIDE
6	028118	028118	3	FW .62 X 1.00X.134 ZN
7	781856	781856	1	5.00" IDLER PULLEY
8	373191	059931	1	SIDE MOUNT CHAIN (21 LINKS)
9	781302	781302	1	IDLER SPRING
10	350884	350884	1	DECK IDLER
11	103721	103721	1	RS 66" XR7 PULLEY COVER
12	103739	103739	1	LS 66" XR7 PULLEY COVER
13	016972	016972	2	NT .625-11 HX G5 ZNYC
14	781385	781385	2	6.00" IDLER PULLEY,
15	797449	797449	4	FW .650X1.125X.18 ZNYCG5
16	792002	792002	4	5/16-18 X 3/4"MALE KNOB
17	016527	016527	3	CS .500-13 X 1.00 HX G5 ZN
18	752386	752386	3	CW .515X 2.25X .204 ZN
19	798975	798975	3	B-SEC 6.32 EOD PULLEY
20	705954	705954	12	CS .500-13 X 1.25 HX G5 ZNYC
21	767962	767962	12	FW .531 X 1.063 X .090 SAE HD ZN
22	768523	768523	6	FW .343 X .687 X .051/.080 HD ZN
23	058776	058776	6	NT .312-18 HXZY NL
24	212472	212472	3	KEY 1/4 SQ X 1.00 LONG
25	796235X	796235	3	SPINDLE HOUSING ASSEMBLY
26	798496	798496	3	BLADE, F22.50"-H-F-CW
27	769257	769257	1	FW .656X 1.250X.250 ZNYC
28	782474	782474	5	CW .631 2.250 X .187 PNT
29	029934	029934	3	CS .625-11 X 3.00 HX G5 ZNYC
30	783738	783738	2	CS .625-11 X 3.00 FULL HX G5 ZN

NOTES:

1. Torque to 118 ft. lbs.
2. Torque to 67-75 ft. lbs.
3. Apply grease to zerk (see owner's manual).
4. See "72", 66" & 54" Side Disch. Deck Belt Routing/Tensioning" on page 8-6 for belt tensioning.
5. See "Spindle Assembly—796235X" on page 7-34 for breakdown.

60" Side Discharge XR7 Deck Assembly



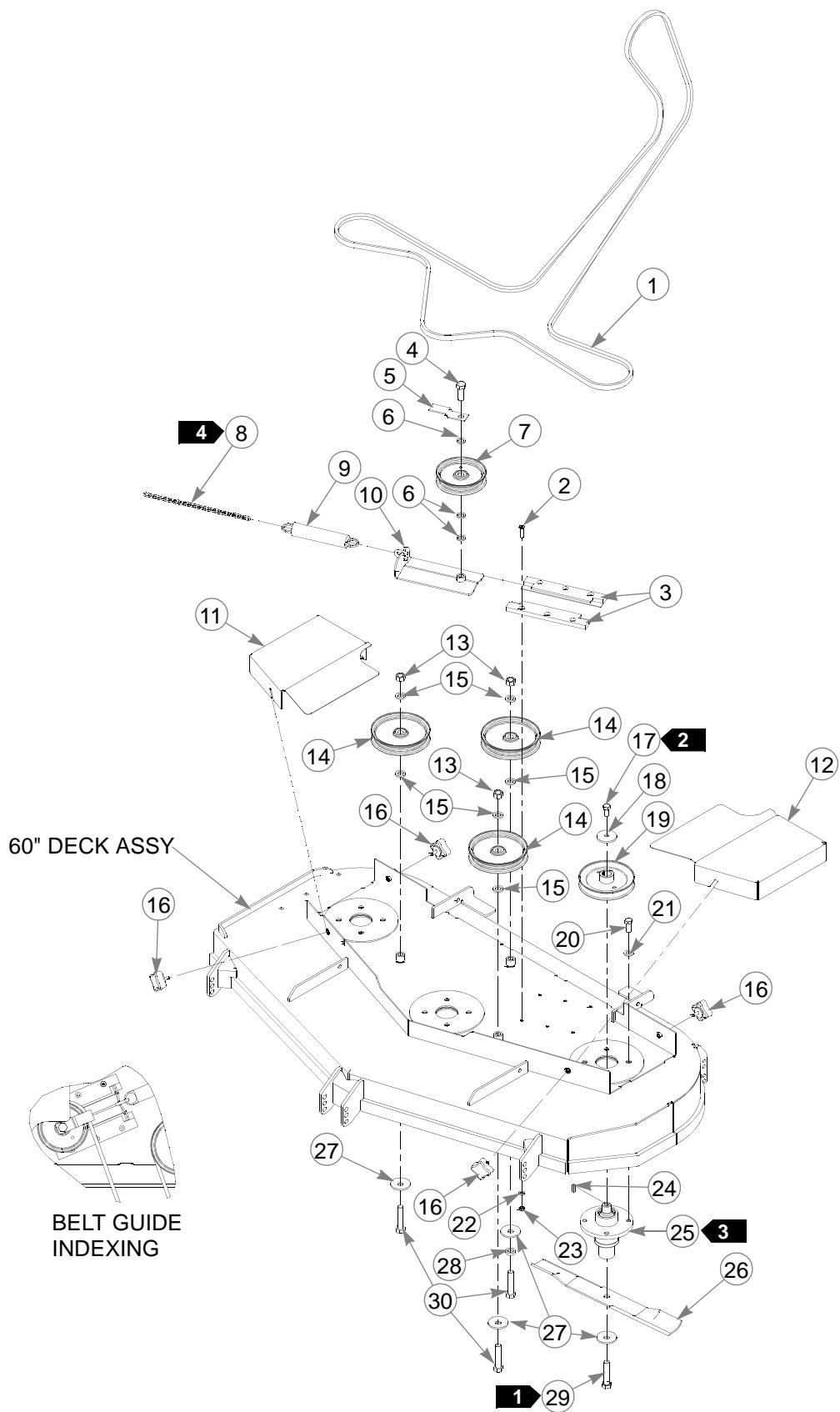
60" Side Discharge XR7 Deck Assembly

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
3 ➤ 1	549154	108501	1	60" DECK W/A CRATED
2	798694	798694	1	RUBBER CHUTE ASSEMBLY
3	052860	052860	8	CS .375-16 X 1.25 HX G5
4	767954	767954	26	FW .406 X .812 X .060 SAE HD ZN
5	086660	086660	14	NT .375-16 HX LK NY
6	103010	103010	1	DISCHARGE CHUTE MOUNT BRACKET
7	781708	N/A	6	CS .500-13 X 4.25 HX G5 ZN
8	767962	N/A	12	FW .531 X 1.063 X .090 SAE HD ZN
9	031997	N/A	6	ANTI-SCALP WHEEL
10	053199	N/A	6	NT .500-13 HX JAM ZN
11	781567	781567	6	NT .500-13 HX G8 ZY NL
12	808485	808485	4	5/16-18 THREAD RIVET NUT
13	103184	103184	2	REAR ANTI-SCALP BRACKET
14	005116	005116	4	CS .375-16 X 1.375 HX G5 ZNYC
15	314104	314104	1	PUSHER
16	015495	015495	2	STRAIGHT GREASE FITTING
17	808493	808493	2	3/8-16 THREAD RIVET NUT
18	025395	025395	2	CB .375-16 X 1.00 STD CD
2 ➤	788166	788166	6	ANTI SCALP WHEEL ASSY

NOTES:

1. Do not torque, Item 2 (798694 Discharge Chute) must pivot freely.
2. Includes items 7, 8, 9, and 10.
3. Service part deck includes decals (see "60" Side Discharge XR7 Deck Decals" on page 9-6 for listing of decals).

60" Side Discharge XR7 Deck Pulley Assembly



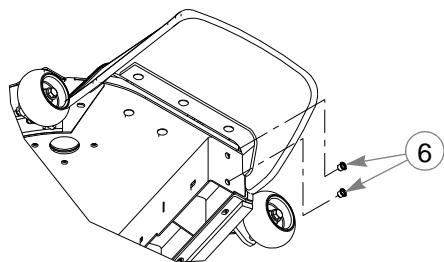
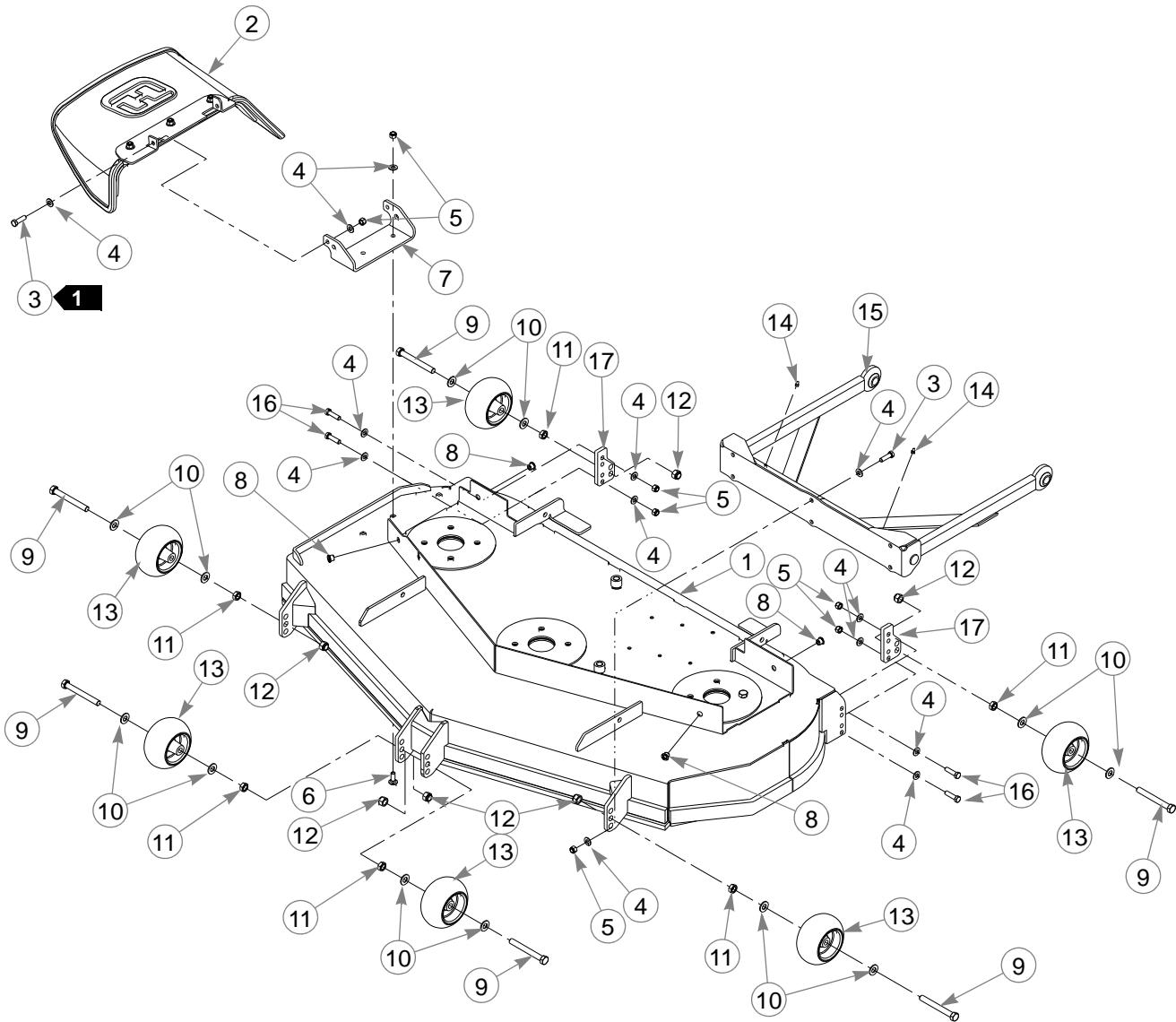
60" Side Discharge XR7 Deck Pulley Assembly

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY	DESCRIPTION
1	601466	601466	1	B-SECTION BELT
2	797910	797910	6	CS .312-18 X 1.50 FLT SH ZNYC
3	601434	601434	2	UHMW IDLER SLIDE
4	025007	025007	1	CS .625-11 X 1.75 HX G5 ZNYC
5	347443	347443	1	DECK BELT IDLER GUIDE
6	028118	028118	3	FW .62 X 1.00X.134 ZN
7	781856	781856	1	5.00" IDLER PULLEY
8	373191	059931	1	SIDE MOUNT CHAIN (21 LINKS)
9	781302	781302	1	IDLER SPRING
10	350884	350884	1	DECK IDLER
11	103192	103192	1	RS 60" XR7 PULLEY COVER
12	103200	103200	1	LS 60" XR7 PULLEY COVER
13	016972	016972	3	NT .625-11 HX G5 ZNYC
14	781385	781385	3	6.00" IDLER PULLEY,
15	797449	797449	6	FW .650X1.125X.18 ZNYCG5
16	792002	792002	4	5/16-18 X 3/4"MALE KNOB
17	016527	016527	3	CS .500-13 X 1.00 HX G5 ZN
18	752386	752386	3	CW .515X 2.25X .204 ZN
19	770842	770842	3	DECK DRIVE PULLEY
20	705954	705954	12	CS .500-13 X 1.25 HX G5 ZNYC
21	767962	767962	12	FW .531 X 1.063 X .090 SAE HD ZN
22	768523	768523	6	FW .343 X .687 X .051/.080 HD ZN
23	058776	058776	6	NT .312-18 HXZY NL
24	212472	212472	3	KEY 1/4 SQ X 1.00 LONG
25	796235X	796235	3	SPINDLE HOUSING ASSEMBLY
26	794685	794685	3	BLADE, F20.50" H-F-CW
27	782474	782474	6	CW .631 2.250 X .187 PNT
28	769257	769257	1	FW .656X 1.250X.250 ZNYC
29	029934	029934	3	CS .625-11 X 3.00 HX G5 ZNYC
30	783738	783738	3	CS .625-11 X 3.00 FULL HX G5 ZN

NOTES:

1. Torque to 118 ft. lbs.
2. Torque to 65-75 ft. lbs.
3. Apply grease to zerk (see owner's manual).
4. See "60" Side Disch. XR7 Deck Belt Routing/Tensioning" on page 8-7 for belt tensioning.
5. See "Spindle Assembly—796235X" on page 7-34 for breakdown.

54" Side Discharge XR7 Deck Assembly



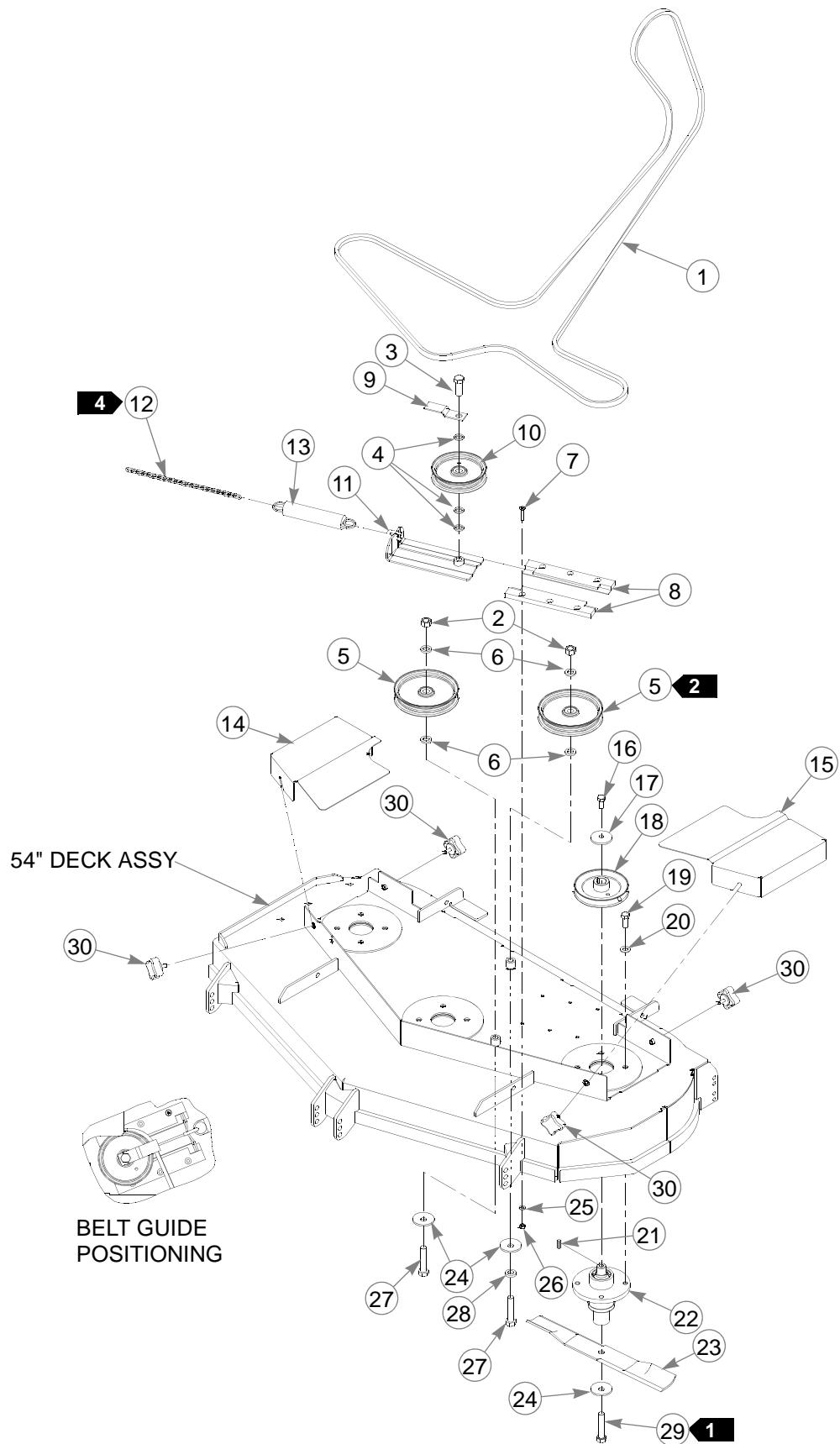
54" Side Discharge XR7 Deck Assembly

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	549105	108607	1	54" DECK W/A CRATED
2	798694	798694	1	54" DISCHARGE CHUTE
3	052860	052860	8	CS .375-16 X 1.25 HX G5 ZN
4	767954	767954	26	FW .406 X .812 X .060 SAE HD ZN
5	086660	086660	14	NT .375-16 HX LK NY
6	025395	025395	2	CB .375-16X 1.00 STD CD
7	103010	103010	1	DISCHARGE CHUTE MOUNT BRACKET
8	808485	808485	4	5/16-18 THREAD RIVET NUT
9	781708	N/A	6	CS .500-13 X 4.25 HX G5 ZN
10	767962	N/A	12	FW .531 X 1.063 X.090 SAE HD ZN
11	053199	N/A	6	NT .500-13 HX JAM ZN
12	781567	781567	6	NT .500-13 HX G8 ZY NL
13	031997	N/A	6	ANTI-SCALP WHEEL
14	015495	015495	2	STRAIGHT GREASE FITTING
15	314104	314104	1	PUSHER
16	005116	005116	4	CS .375-16X1.375 HX G5
17	103184	103184	2	REAR ANTI-SCALP BRACKET
18	808493	808493	2	3/8-16 THREAD RIVET NUT
2	788166	788166	6	ANTI-SCALP WHEEL ASSEMBLY

NOTES:

1. Do not torque, Item 2 (798694 Discharge Chute) must pivot freely.
2. Includes items 9, 10, 11, and 13.
3. Service part deck includes decals (see "54" Side Discharge XR7 Deck Decals" on page 9-7 for listing of decals) and item 2 (Discharge Chute).

54" Side Discharge XR7 Deck Pulley Assembly



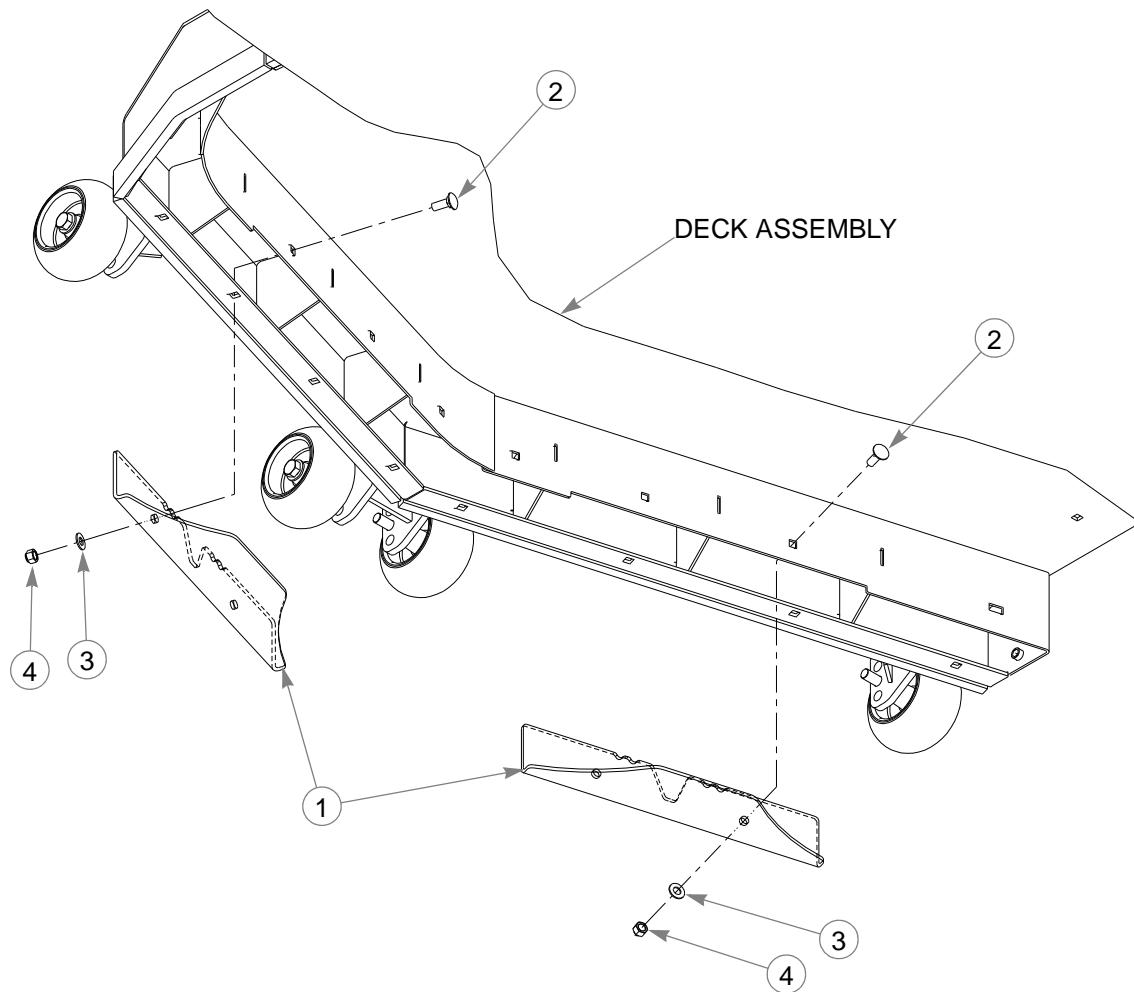
54" Side Discharge XR7 Deck Pulley Assembly

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	601525	601525	1	B-SECTION BELT
2	016972	016972	2	NT .625-11 HX G5 ZNYC
3	025007	025007	1	CS .625-11X1.750 HX G5
4	028118	028118	3	FW .62 X 1.00 X .134 ZN
5	781385	781385	2	6.00" IDLER PULLEY
6	797449	797449	4	FW .650X1.125X.18 ZNYCG5
7	797910	797910	6	CS .312-18X1.50FLT SH ZY
8	601434	601434	2	UHMW IDLER SLIDE
9	347443	347443	1	DECK BELT IDLER TOP GUIDE
10	781856	781856	1	5.00" IDLER PULLEY
11	350884	350884	1	DECK IDLER
12	373191	059931	1	SIDE MOUNT CHAIN 21 LINKS
13	781302	781302	1	IDLER SPRING
14	103986	103986	1	RS 54" PULLEY COVER
15	103994	103994	1	LS 54" PULLEY COVER
16	016527	016527	3	CS .500-13 X 1.00 HX G5 ZN
17	752386	752386	3	CW .515X 2.25X .204 ZN
18	798967	798967	3	DECK DRIVE PULLEY
19	705954	705954	12	CS .500-13X1.25 HX G5 ZY
20	767962	767962	12	FW .531X 1.063X.090 SAE
21	212472	212472	3	KEY 1/4 SQ X 1.00 LONG
22	796235X	796235	3	DECK SPINDLE ASSY
23	797696	797696	3	BLADE, F18.50"-H-F-CW
24	782474	782474	5	CW .631 X 2.250 X .187 PNT
25	768523	768523	6	FW .343X.687X.051/.080H
26	058776	058776	6	NT .312-18 HXZY NL
27	783738	783738	2	CS .625-11X3.00 FULL HX G5 ZN
28	769257	769257	1	FW .656X 1.250X.250 ZNY
29	029934	029934	3	CS .625-11 X 3.00 HX G5 ZNYC
30	792002	792002	4	5/16-18 X 3/4"MALE KNOB

NOTES:

1. Torque to 118 ft. lbs.
2. Torque to 65-75 ft. lbs.
3. Apply grease to zerk.
4. See "72", 66" & 54" Side Disch. Deck Belt Routing/Tensioning" on page 8-6 for belt tensioning.
5. See "Spindle Assembly—796235X" on page 7-34 for breakdown.

Side Discharge Deck—"A" Adaptors

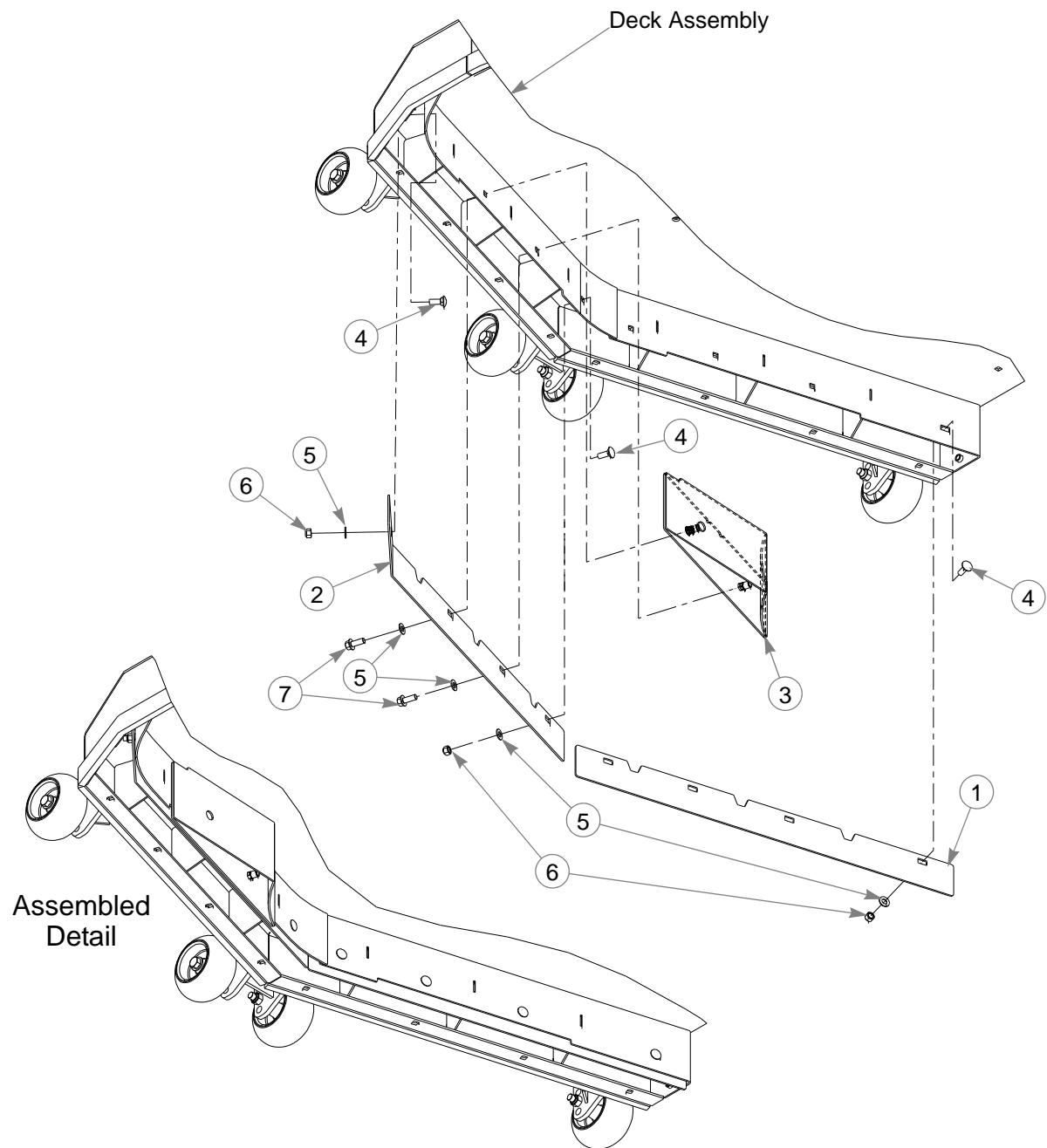


Side Discharge Deck—"A" Adaptors

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	108661	108661	2	AIR FLOW FLOOR (72" DECKS)
	108531	108531	2	AIR FLOW FLOOR (66" DECKS)
	108516	108516	2	AIR FLOW FLOOR (60" DECKS)
	108619	108619	2	AIR FLOW FLOOR (54" DECKS)
2	025395	025395	4	CB .375-16X 1.00 STD CD
3	767954	767954	4	FW .406X .812 X.060 SAE
4	086660	086660	4	NT .375-16 HXZY NL

NOTES:

Side Discharge Deck—"B" Adaptors



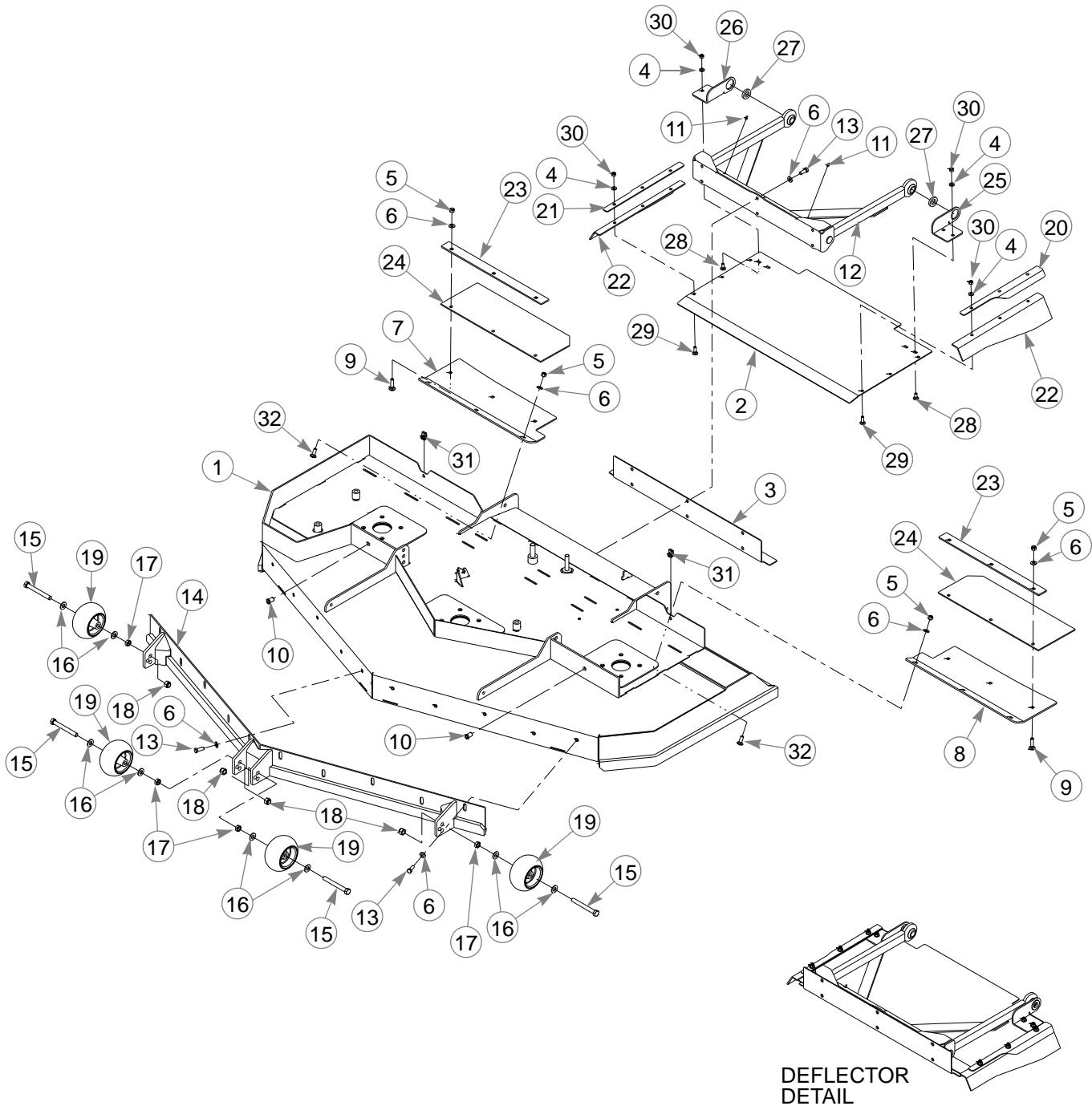
Side Discharge Deck—"B" Adaptors

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	108663	108663	1	AIR FLOW BAFFLE, "B" RIGHT SIDE (72" DECKS)
	108533	108533	1	AIR FLOW BAFFLE, "B" RIGHT SIDE (66" DECKS)
	108518	108518	1	AIR FLOW BAFFLE, "B" RIGHT SIDE (60" DECKS)
	108621	108621	1	AIR FLOW BAFFLE, "B" RIGHT SIDE (54" DECKS)
2	108662	108662	1	AIR FLOW BAFFLE, "B" LEFT SIDE (72" DECKS)
	108532	108532	1	AIR FLOW BAFFLE, "B" LEFT SIDE (66" DECKS)
	108517	108517	1	AIR FLOW BAFFLE, "B" LEFT SIDE (60" DECKS)
	108620	108620	1	AIR FLOW BAFFLE, "B" LEFT SIDE (54" DECKS)
3	108241	108035	1	AIR LIFT DEFLECTOR (72" DECKS)
	108221	108215	1	AIR LIFT DEFLECTOR (66" DECKS)
	108212	108013	1	AIR LIFT DEFLECTOR (60" DECKS)
	108254	108256	1	AIR LIFT DEFLECTOR (54" DECKS)
4	025395	025395	6	CB .375-16X 1.00 STD CD
5	767954	767954	8	FW .406 X .812 X .060 SAE HD ZN
6	086660	086660	6	NT .375-16 HXZY NL
7	029751	029751	2	CS .375-16X1.000 HXFLK

NOTES:

1. Service part includes rivet nuts.

72" Rear Discharge Deck Assembly



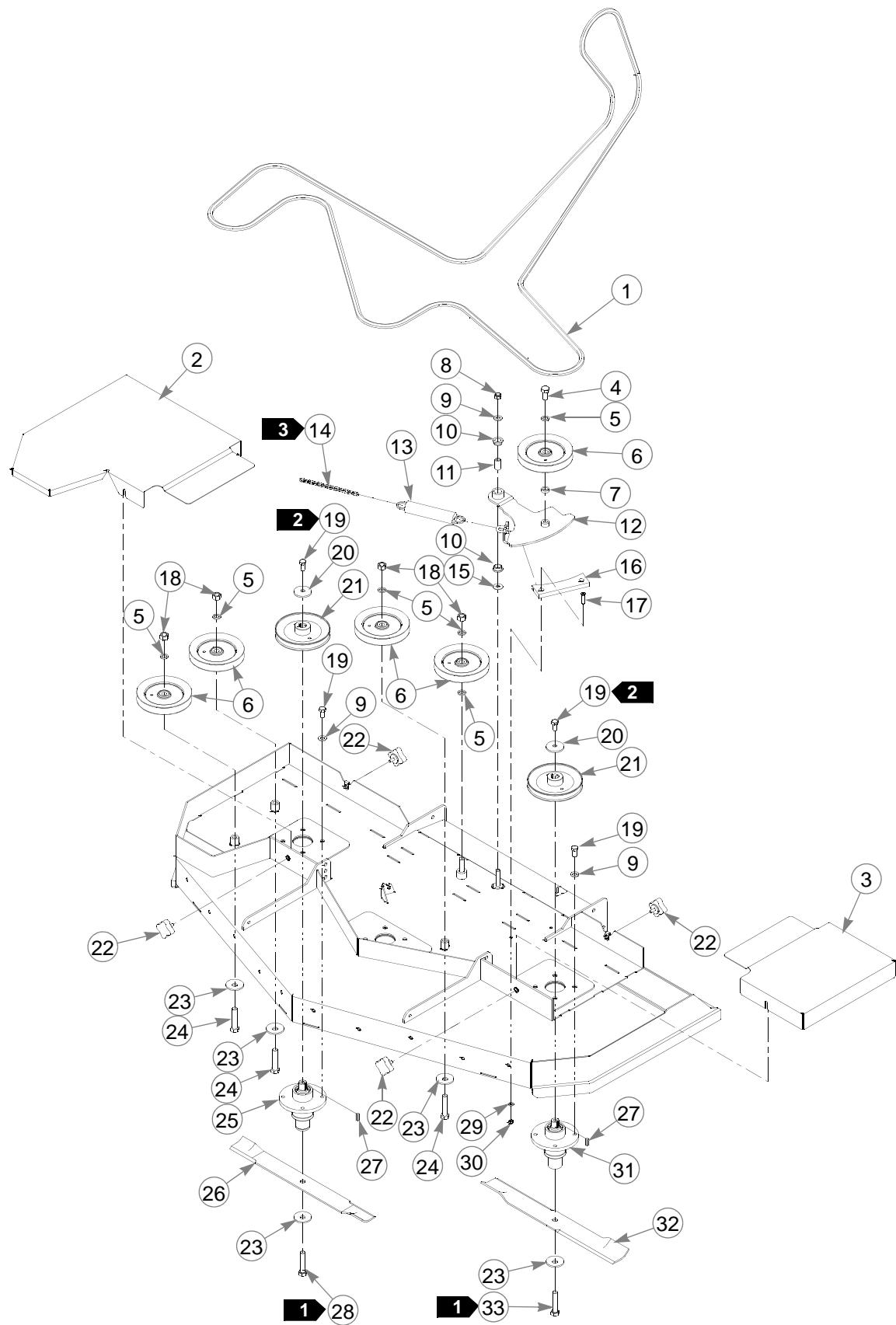
72" Rear Discharge Deck Assembly

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
3 1	549667	110450	1	72" REAR DISCHARGE DECK
2	109484	109484	1	DISCHARGE SHIELD
3	109485	109485	1	GUARD MOUNTING ANGLE
4	768523	768523	10	FW .343 X .687 X .051/.080 HD ZN
5	086660	086660	12	NT .375-16 HX LK NY
6	767954	767954	28	FW .406 X .812 X .060 SAE HD ZN
7	110471	110471	1	EXTENSION BRACKET RH 72"
8	110472	110472	1	EXTENSION BRACKET LH 72"
9	710194	710194	6	CB .375-16 X 1.50 STD G5
10	808485	808485	2	5/16-18 THREAD RIVET NUT
11	015495	015495	2	STRAIGHT GREASE FITTING
12	349803	349803	1	PUSHER
13	036244	036244	16	CS .375-16 X 1.00 HX G5 ZN
14	101477	101477	1	72" REAR DISCHARGE FRONT ANGLE
15	781708	N/A	4	CS .500-13 X 4.25 HX G5 ZN
16	767962	N/A	8	FW .531 X 1.063 X.090 SAE HD ZN
17	053199	N/A	4	NT .500-13 HX JAM ZN
18	781567	781567	4	NT .50-13 HX ZY NL
19	031997	N/A	4	ANTI-SCALP WHEEL
20	109486	109486	1	CLAMP ANGLE LS
21	109487	109487	1	CLAMP ANGLE RS
4 22	601483	601483	2	RUBBER SIDE FLAP
23	107712	107712	2	ANGLE, DISCHARGE CHUTE
4 24	600930	600930	2	RD REAR FLAP
25	109482	109482	1	CHUTE BRACKET
26	109483	109483	1	CHUTE BRACKET
27	778399	778399	2	FW .781 X 1.375 X .250 ZN YC
28	016253	016253	4	CB .312-18 X .750 FUL ZN
29	037887	037887	6	CB .312-18 X 1.000 FUL Z
30	058776	058776	10	NT .312-18 HX ZY NL
31	601069	601069	2	CN .312-18X.200
32	025395	025395	6	CB .375-16X 1.00 STD CD
1 2	788166	788166	4	ANTI SCALP WHEEL ASSEMBLY

NOTES:

1. Factory assembled in top hole for shipping purposes.
2. Includes Items 15 through 17 and 19.
3. Service part deck includes decals, see "72" Rear Discharge Deck Decals" on page 9-8.
4. When installing Items 22 and 24, Item 24 should be on top of Item 22.

72" Rear Discharge Deck Pulley Assembly



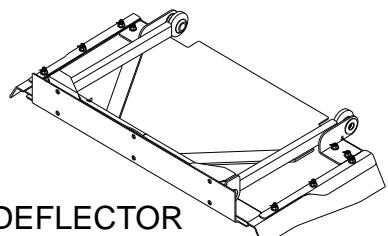
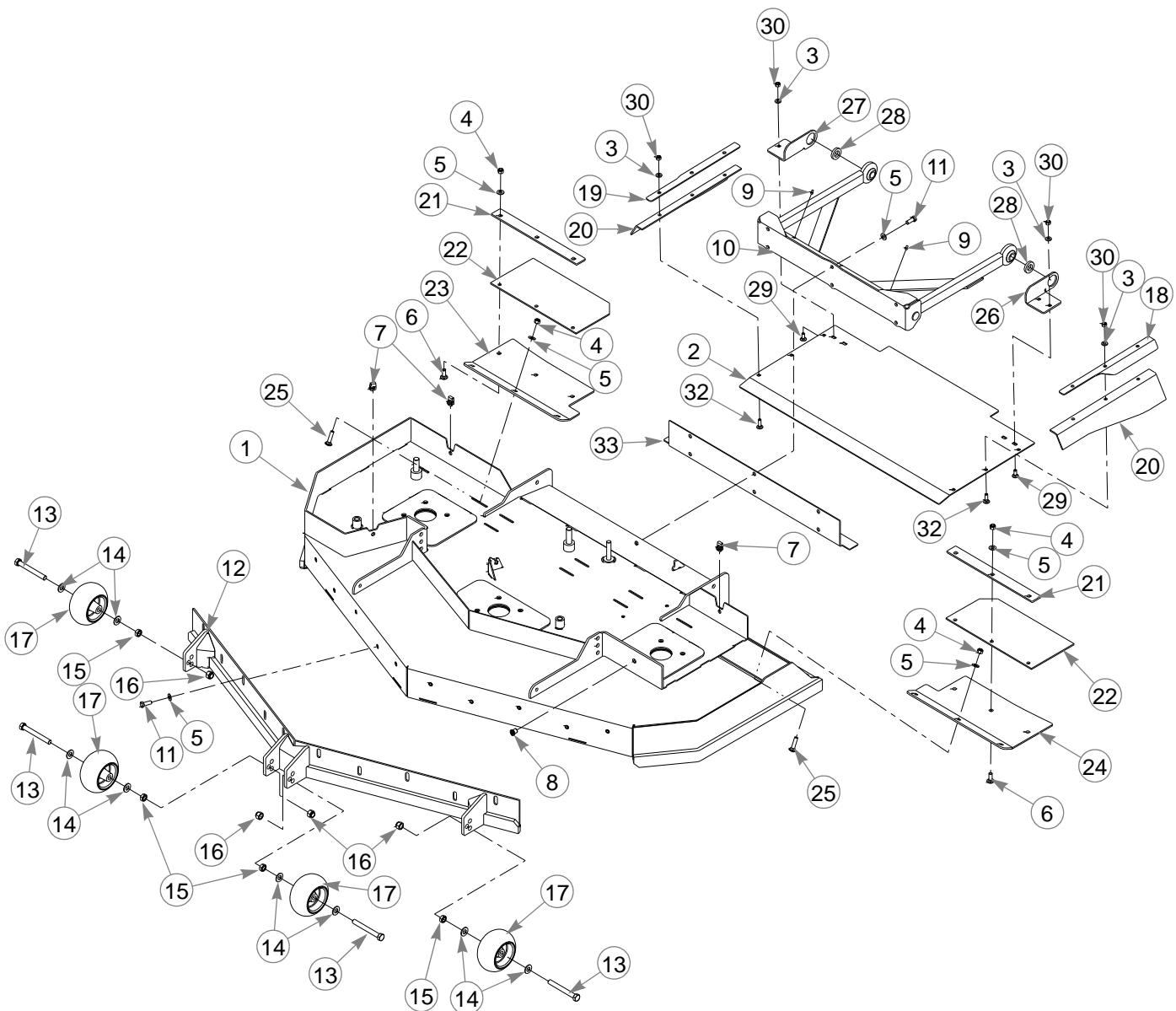
72" Rear Discharge Deck Pulley Assembly

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	797167	797167	1	72" REAR DISCHARGE DECK BELT
2	110459	110459	1	PULLEY COVER RH
3	110458	110458	1	PULLEY COVER LH
4	781872	781872	1	CS .625-11X1.25 HX G5 Z
5	028118	028118	6	FW .62 X 1.00 X .134 ZN
6	796714	796714	5	6" HB IDLER PULLEY RD
7	600296	600296	1	DECK IDLER SPACER
8	781567	781567	1	NT .500-13 HX G8 ZY NL
9	767962	767962	13	FW .531 X 1.063 X .090 SAE HD ZN
10	770867	770867	2	PLASTIC BUSHING .750X1
11	109549	109549	1	IDLER PIVOT BUSHING
12	109948	109948	1	IDLER ARM W/A
13	781302	781302	1	IDLER SPRING
14	259812	059931	1	SIDE MOUNT CHAIN (13 LINKS)
15	704759	704759	1	FW .500X 1.250X.075 ZNY
16	601779	601779	1	IDLER GUIDE UHMW
17	797910	797910	2	CS .312-18 X1.50FLT SH ZY
18	016972	016972	4	NT .625-11 HX G5 ZNYC
19	016527	016527	15	CS .500-13 X 1.00 HX G5 ZN
20	752386	752386	3	CW .515 X 2.25 X .204 ZN
21	538850	538850	3	DRIVE PULLEY DB-112
22	792002	792002	4	5/16-18 X 3/4" MALE KNOB
23	782474	782474	6	CW .631 X 2.250 X .187 PNT
24	783738	783738	3	CS .625-11 X 3.00 FULL HX G5 ZN
25	796680X	796680	1	REAR DISCHARGE DECK SPINDLE ASSEMBLY
26	796508	796508	1	BLADE, F23.86-L-F-CCW
27	212472	212472	3	KEY 1/4 SQ X 1.00 LONG
28	796722	796722	1	CS .625-11 X 3.00 LH HX G
29	768523	768523	1	FW .343 X .687 X .051/.080 HD ZN
30	058776	058776	1	NT .312-18 HXZY NL
31	796235X	796235	2	SPINDLE HOUSING ASSEMBLY
32	796839	796839	2	BLADE, F23.86-L-F-CW
33	029934	029934	2	CS .625-11 X 3.00 HX G5 ZNYC

NOTES:

1. Torque to 118 ft. lbs.
2. Torque to 65-75 ft. lbs.
3. See "72", 60" & 54" Rear Discharge Deck Belt Routing/Tensioning" on page 8-8 for belt tensioning.
4. See "Spindle Assembly—796235X" on page 7-34 for breakdown.
5. See "Spindle Assembly—796680X" on page 7-35 for breakdown.

60" Rear Discharge Deck Assembly



DEFLECTOR DETAIL

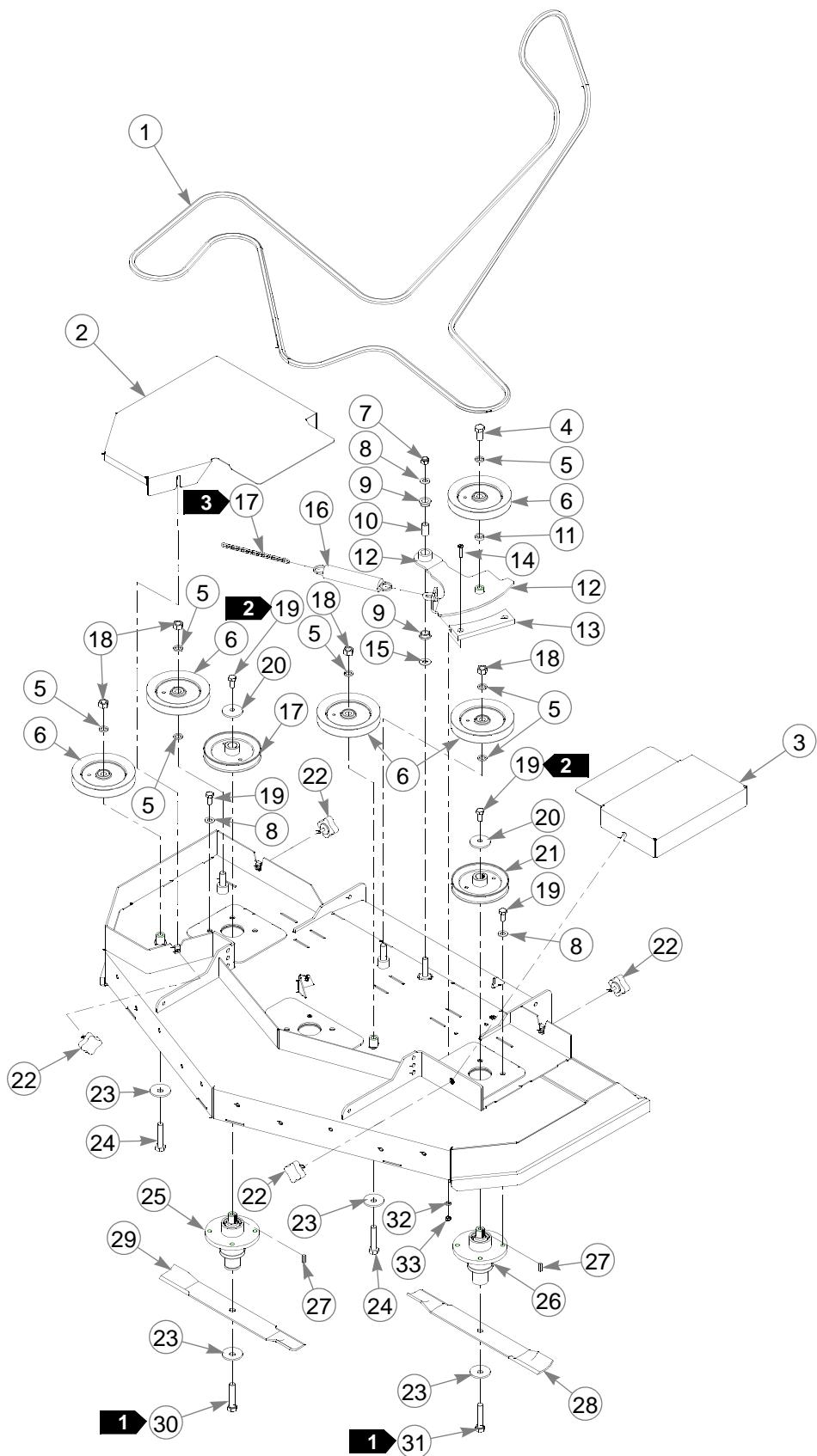
60" Rear Discharge Deck Assembly

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
3 1	549592	110402	1	60" REAR DISCHARGE DECK
2	109484	109484	1	DISCHARGE SHIELD
3	768523	768523	10	FW .343 X .687 X .051/.080 HD ZN
4	086660	086660	12	NT .375-16 HX LK NY
5	767954	767954	28	FW .406 X .812 X .060 SAE HD ZN
6	710194	710194	6	CB .375-16X 1.50 STD G5
7	601069	601069	3	CN .312-18X.200 MAX THK
8	792887	792887	1	5/16-18 THREAD RIVET NUT HEX
9	015495	015495	2	STRAIGHT GREASE FITTING
10	349803	349803	1	PUSHER
11	036244	036244	16	CS .375-16 X 1.00 HX G5 ZN
12	352591	352591	1	60" REAR DISCHARGE FRONT ANGLE
13	781708	N/A	4	CS .500-13 X 4.25 HX G5 ZN
14	767962	N/A	8	FW .531 X 1.063 X.090 SAE HD ZN
15	053199	N/A	4	NT .500-13 HX JAM ZN
16	781567	781567	4	NT .500-13 HX G8 ZY NL
17	031997	N/A	4	ANTI-SCALP WHEEL
18	109486	109486	1	CLAMP ANGLE LS
19	109487	109487	1	CLAMP ANGLE RS
4 20	601483	601483	2	SIDE FLAP RUBBER
21	110182	110182	2	FLAP HOLD DOWN
4 22	601717	601717	2	RUBBER DISCHARGE FLAP
23	110180	110180	1	FLAP EXTENSION, RH
24	110181	110181	1	FLAP EXTENSION, LH
25	025395	025395	6	CB .375-16X 1.00 STD CD
26	109482	109482	1	CHUTE BRACKET RS
27	109483	109483	1	CHUTE BRACKET LS
28	778399	778399	2	FW .781 X 1.375 X .250 ZNYC
29	016253	016253	4	CB .312-18 X .750 FUL ZN
30	058776	058776	10	NT .312-18 HXZY NL
31	025296	025296	2	FW .760X 1.625X.08 ZNYC
32	037887	037887	6	CB .312-18X 1.000 FUL Z
33	109485	109485	1	GUARD MTG ANGLE
1	788166	788166	4	ANTI SCALP WHEEL ASSEMBLY

NOTES:

1. Includes Items 13 through 15 and 17.
2. Factory assembled in top hole for shipping purposes.
3. Service part deck includes decals, see "72" Rear Discharge Deck Decals" on page 9-8.
4. When installing Items 20 and 22, Item 22 should be on top of Item 20.

60" Rear Discharge Deck Pulley Assembly



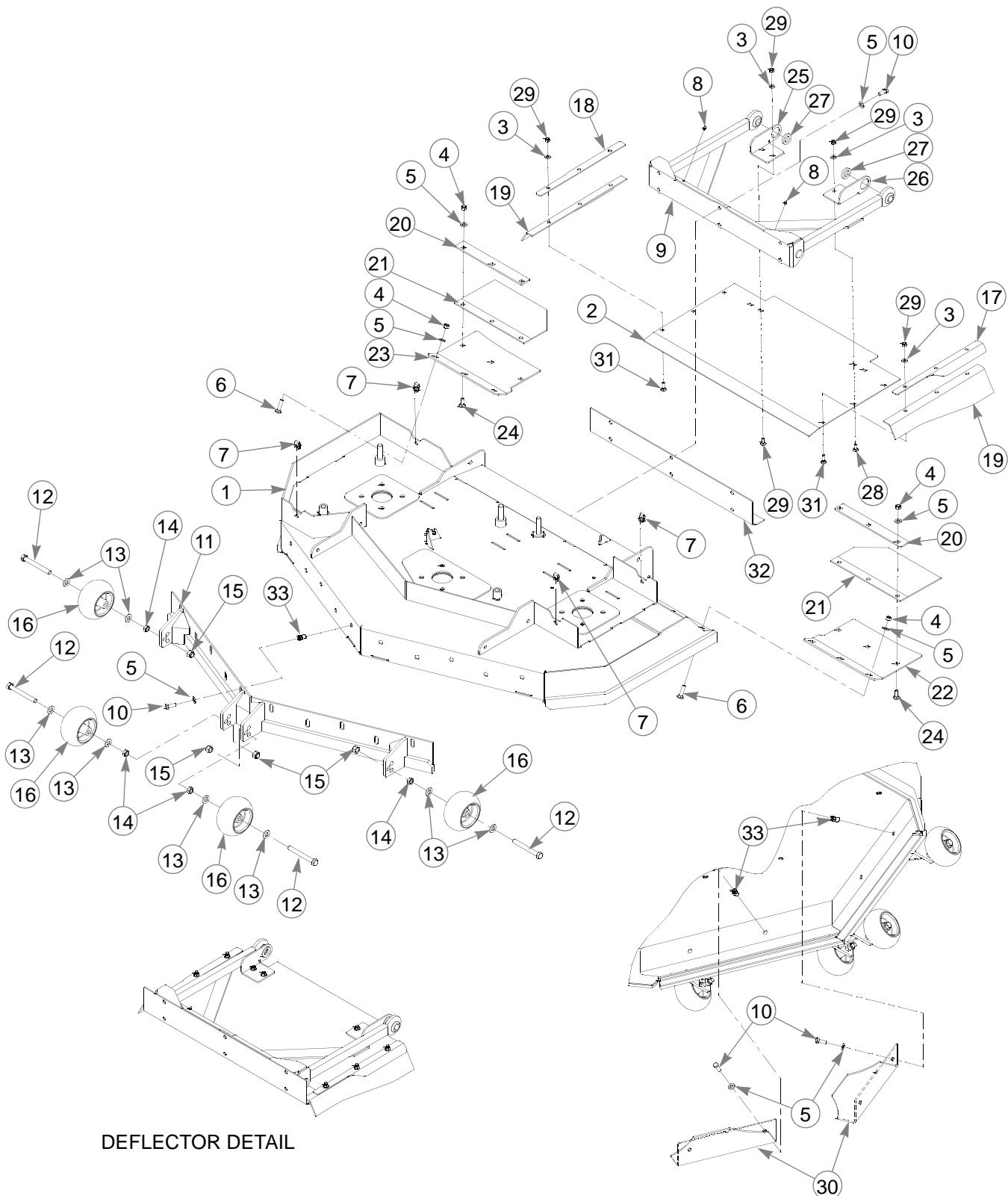
60" Rear Discharge Deck Pulley Assembly

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	601673	601673	1	BELT, BB-SEC 251.4" EL
2	110411	110411	1	PULLEY COVER, RH,60"
3	110412	110412	1	PULLEY COVER, LH,60"
4	781872	781872	4	CS .625-11X1.25 HX G5 Z
5	028118	028118	7	FW .62 X 1.00 X .134 ZN
6	796714	796714	5	6" HB IDLER PULLEY RD
7	781567	781567	5	NT .500-13 HX G8 ZY NL
8	767962	767962	12	FW .531 X 1.063 X .090 SAE HD ZN
9	770867	770867	1	BUSHING, PLAS .750X1(FS)
10	109549	109549	6	BUSHING, IDLER PIVOT
11	600296	600296	1	DECK IDLER SPACER
12	109948	109948	1	IDLER ARM W/A
13	601779	601779	1	IDLER SLIDE UHMW
14	797910	797910	2	CS .312-18X1.50FLT SH ZY
15	704759	704759	1	FW .500X 1.250X.075 ZNY
16	781302	781302	1	IDLER SPRING
17	259812	059931	1	DECK LIFT CHAIN (13 LINKS)
18	016972	016972	4	NT .625-11 HX G5 ZNYC
19	016527	016527	15	CS .500-13 X 1.00 HX G5 ZN
20	752386	752386	3	FW .510 X 1.75 X .18 ZN
21	770842	770842	3	B-SECTION PULLEY
22	792002	792002	4	5/16-18 X 3/4" MALE KNOB
23	782474	782474	6	CW .631 X 2.250 X .187 PNT
24	783738	783738	3	CS .625-11X3.00 FULL HX G5 ZN
25	796680X	796680	1	REAR DISCHARGE DECK SPINDLE ASSEMBLY
26	796235X	796235	2	DECK SPINDLE ASSY
27	212472	212472	3	KEY 1/4 SQ X 1.00 LONG
28	600901	600901	2	BLADE, F20.50"-L-F-CW
29	795633	795633	1	BLADE, F20.50"-L-F-CCW
30	796722	796722	1	CS .625-11 X 3.00 LH HX G
31	029934	029934	2	CS .625-11 X 3.00 HX G5 ZNYC
32	768523	768523	1	FW .343X.687X.051/.080H
33	058776	058776	1	NT .312-18 HXZY NL

NOTES:

1. Torque to 118 ft. lbs.
2. Torque to 65-75 ft. lbs.
3. See "72", 60" & 54" Rear Discharge Deck Belt Routing/Tensioning" on page 8-8 for belt tensioning.
4. See "Spindle Assembly—796235X" on page 7-34 for breakdown.
5. See "Spindle Assembly—796680X" on page 7-35 for breakdown.

54" Rear Discharge Deck Assembly



DEFLECTOR DETAIL

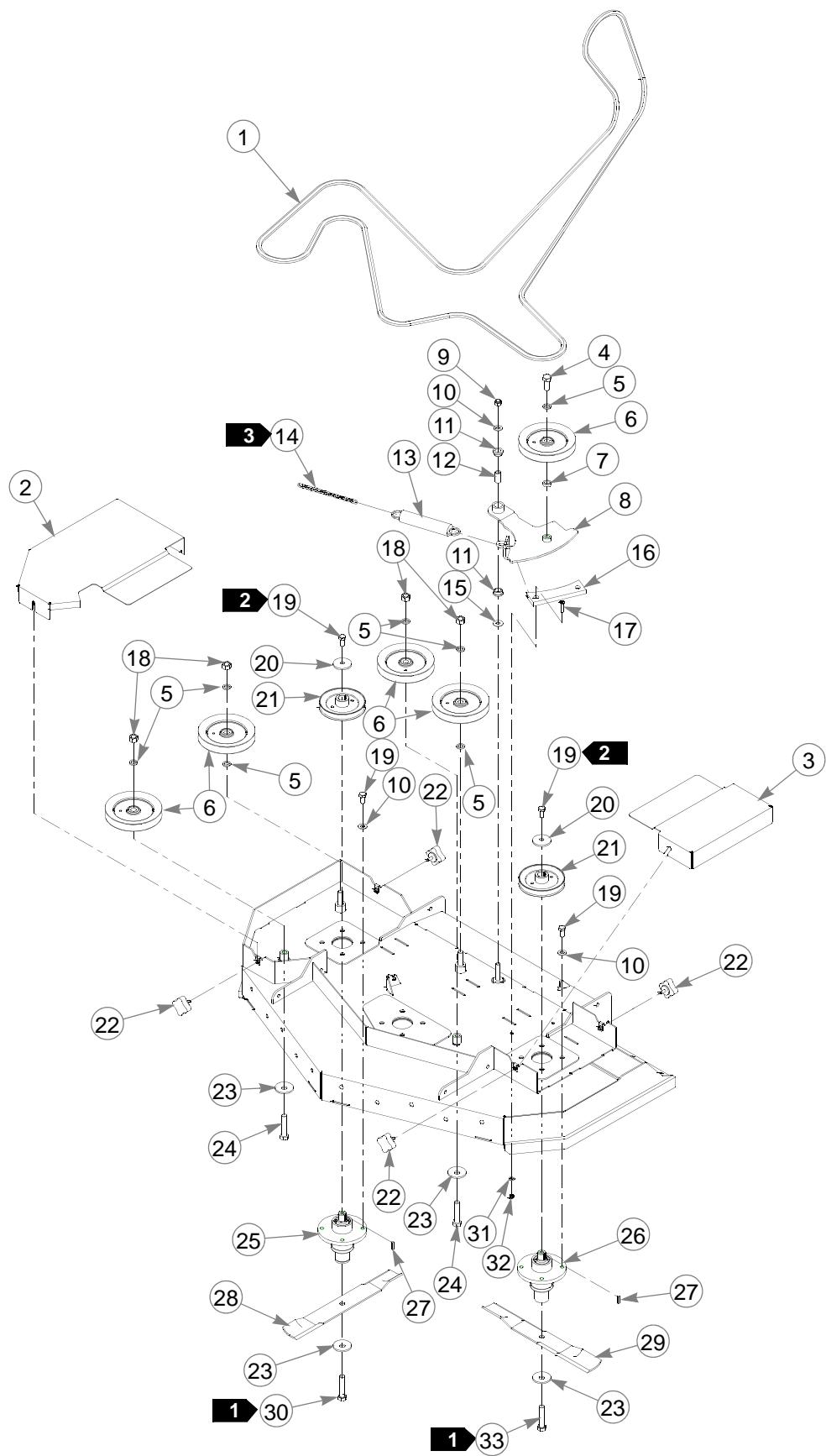
54" Rear Discharge Deck Assembly

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
3 1	549584	110441	1	54" REAR DISCHARGE DECK W/A
2	109490	109490	1	DISCHARGE SHIELD
3	768523	768523	10	FW .343 X .687 X .051/.080 HD ZN
4	086660	086660	12	NT .375-16 HX LK NY
5	767954	767954	32	FW .406 X .812 X .060 SAE HD ZN
6	710194	710194	6	CB .375-16X 1.50 STD G5
7	601069	601069	4	CN .312-18X.200 MAX THK
8	015495	015495	2	STRAIGHT GREASE FITTING
9	349803	349803	1	PUSHER
10	036244	036244	20	CS .375-16 X 1.00 HX G5 ZN
11	107975	107975	1	54" REAR DISCHARGE FRONT ANGLE
12	781708	N/A	4	CS .500-13 X 4.25 HX G5 ZN
13	767962	N/A	8	FW .531 X 1.063 X.090 SAE HD ZN
14	053199	N/A	4	NT .500-13 HX JAM ZN
15	781567	781567	4	NT .50-13 HXZY NL
16	031997	N/A	4	ANTI-SCALP WHEEL
17	109486	109486	1	CLAMP ANGLE LS
18	109487	109487	1	CLAMP ANGLE RS
4 19	601483	601483	2	RD SIDE FLAP
20	108816	108816	2	CLAMP BRACKET
4 21	601017	601017	2	RD REAR FLAP
22	109543	109543	2	EXTENSION BRACKET LS 54"
23	109542	109542	2	EXTENSION BRACKET RS 54"
24	025395	025395	6	CB .375-16X 1.00 STD CD
25	109482	109482	1	CHUTE BRACKET RS
26	109483	109483	1	CHUTE BRACKET LS
27	778399	778399	2	FW .781 X 1.375 X .250 ZNYC
28	016253	016253	4	CB .312-18 X .750 FUL ZN
29	058776	058776	10	NT .312-18 HXZY NL
30	107978	107978	2	AIR FLOW BAFFLE
31	037887	037887	6	CB .312-18X 1.000 FUL Z
32	109491	109491	1	SHIELD MTG ANGLE
33	600994	600994	14	RIVET NUT, 3/8-16 THREAD
1 2	788166	788166	4	ANTI-SCALP WHEEL ASSEMBLY

NOTES:

1. Factory assembled in top hole for shipping purposes.
2. Includes Items 12 through 14 and 16.
3. Service part deck includes decals, see "54" Rear Discharge Deck Decals" on page 9-10.
4. When installing Items 19 and 21, Item 21 should be on top of Item 19.

54" Rear Discharge Deck Pulley Assembly



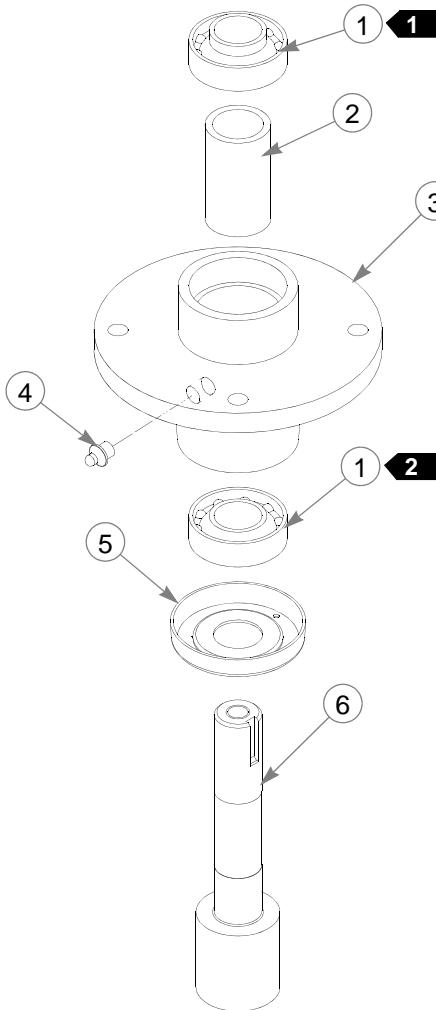
54" Rear Discharge Deck Pulley Assembly

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	601691	601691	1	54" REAR DISCHARGE DECK BELT
2	110449	110449	1	RIGHT 54" REAR DISCHARGE PULLEY COVER
3	110448	110448	1	LEFT 54" REAR DISCHARGE PULLEY COVER
4	794446	794446	1	CS .625-11 X 1.500 HX G5
5	028118	028118	7	FW .62 X 1.00 X .134 ZN
6	796714	796714	5	6" HB IDLER PULLEY RD
7	600296	600296	1	DECK IDLER SPACER
8	109948	109948	1	IDLER ARM W/A
9	781567	781567	1	NT .500-13 HX G8 ZY NL
10	767962	767962	13	FW .531 X 1.063 X .090 SAE HD ZN
11	770867	770867	2	PLASTIC BUSHING .750X1(FS)
12	109549	109549	1	IDLER PIVOT BUSHING
13	781302	781302	1	IDLER SPRING
14	259812	259812	1	CHAIN DECK LIFT SPRING
15	704759	704759	1	FW .500X 1.250X.075 ZNY
16	601779	601779	1	IDLER GUIDE UHMW
17	797910	797910	2	CS .312-18X1.50FLT SH ZY
18	016972	016972	4	NT .625-11 HX G5 ZNYC
19	016527	016527	15	CS .500-13 X 1.00 HX G5 ZN
20	752386	752386	3	CW .515X 2.25X .204 ZN
21	798967	798967	3	B-SECTION PULLEY 5.44 EOD
22	792002	792002	4	5/16-18 X 3/4" MALE KNOB
23	782474	782474	5	CW .631 X 2.250 X .187 PNT
24	783738	783738	2	CS .625-11X3.00 FULL HX G5 ZN
25	796680X	796680	1	REAR DISCHARGE DECK SPINDLE ASSEMBLY
26	796235X	796235	2	DECK SPINDLE ASSY
27	212472	212472	3	KEY 1/4 SQ X 1.00 LONG
28	601013	601013	1	BLADE, F18.50-L-F-CCW
29	601012	601012	2	BLADE F18.50"-L-F-CW
30	796722	796722	1	CS .625-11 X 3.00 LH HX G
31	768523	768523	1	FW .343 X .687 X .051/.080 HD ZN
32	058776	058776	1	NT .312-18 HXZY NL
33	029934	029934	2	CS .625-11 X 3.00 HX G5 ZNYC

NOTES:

1. Torque to 118 ft. lbs.
2. Torque to 65-75 ft. lbs.
3. See "72", 60" & 54" Rear Discharge Deck Belt Routing/Tensioning" on page 8-8 for belt tensioning.
4. See "Spindle Assembly—796680X" on page 7-35 for breakdown.
5. See "Spindle Assembly—796235X" on page 7-34 for breakdown.

Spindle Assembly—796235X

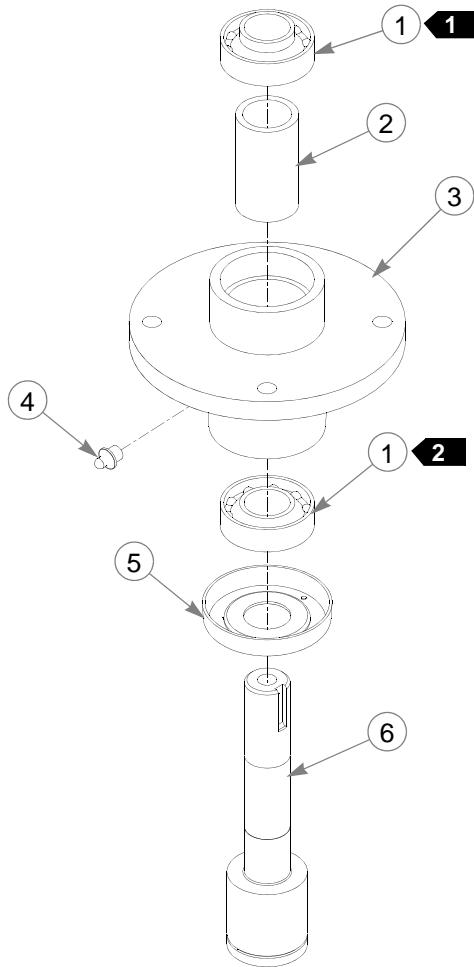


ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	077123	N/A	2	BEARING W/O COLLAR
2	766204	N/A	1	BLADE SPINDLE BUSHING
3	034843	N/A	1	CAST SPINDLE HOUSING
4	012005	N/A	1	GREASE FITTING
5	600893	N/A	1	BEARING DUST COVER
6	796227	N/A	1	SADDLELESS SPINDLE SHAFT

NOTES:

1. Install upper bearing with extended inner race up.
2. Install lower bearing with extended inner race down.

Spindle Assembly—796680X



ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	077123	N/A	2	BEARING W/O COLLAR
2	766204	N/A	1	BLADE SPINDLE BUSHING
3	034843	N/A	1	CAST SPINDLE HOUSING
4	012005	N/A	1	GREASE FITTING
5	600893	N/A	1	BEARING DUST COVER
6	796698	N/A	1	SPINDLE SHAFT

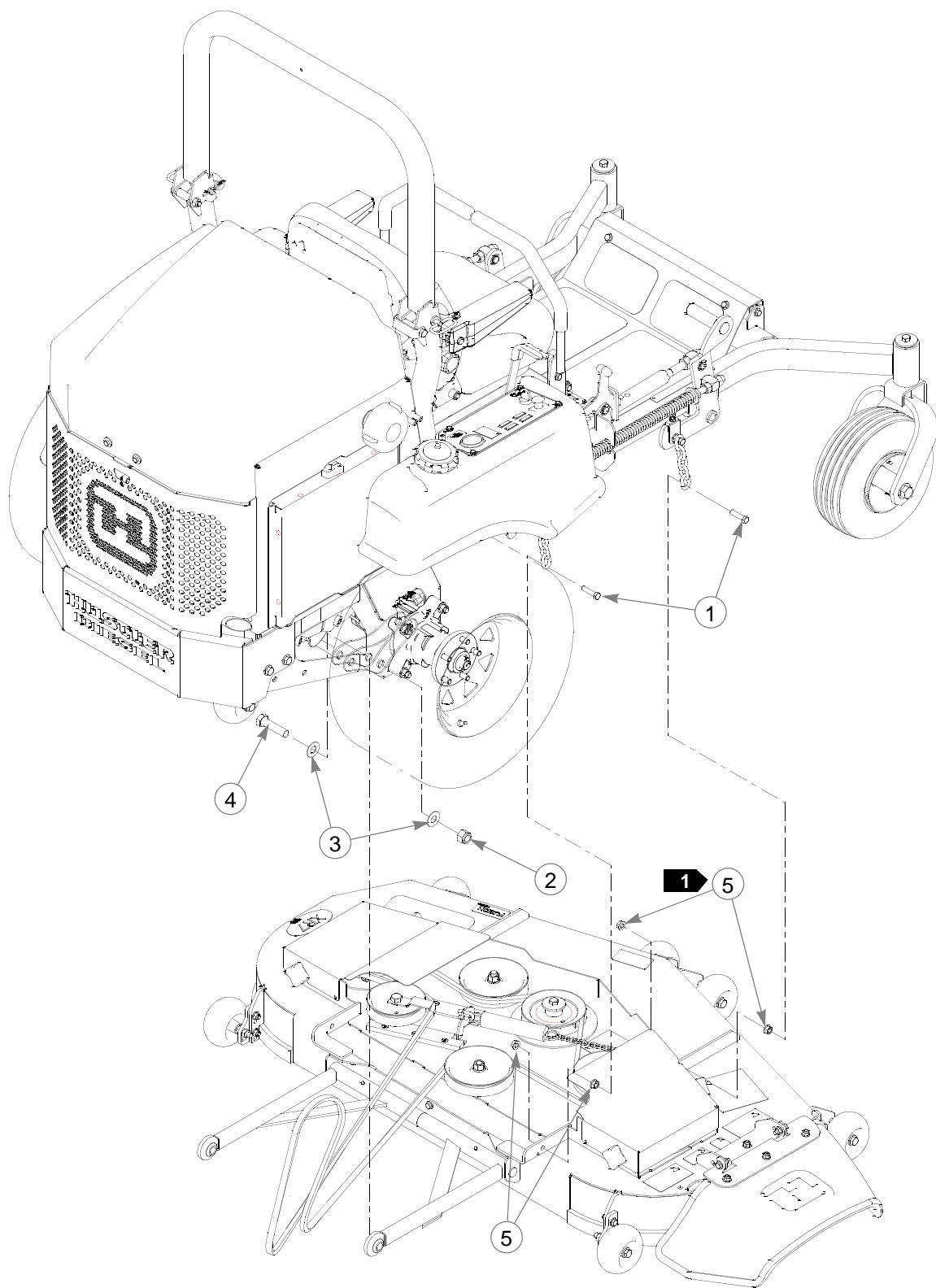
NOTES:

1. Install upper bearing with extended inner race up.
2. Install lower bearing with extended inner race down.

Chapter 8 Contents

Deck Installation	8-2
Seat Installation	8-4
72", 66" & 54" Side Disch. Deck Belt Routing/Tensioning	8-6
60" Side Disch. XR7 Deck Belt Routing/Tensioning	8-7
72", 60" & 54" Rear Discharge Deck Belt Routing/Tensioning	8-8

Deck Installation

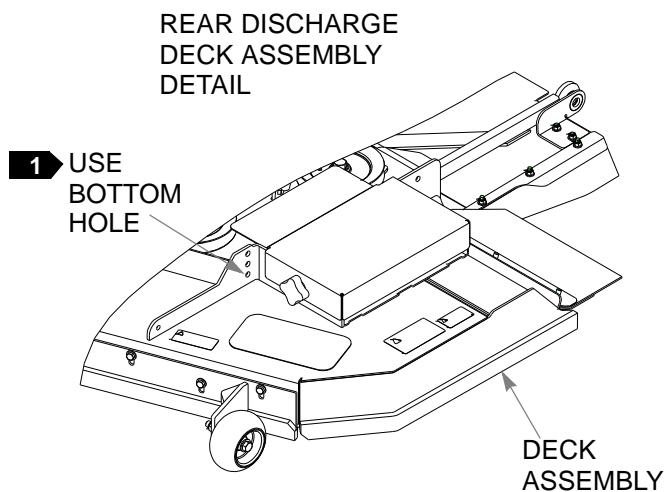


Deck Installation

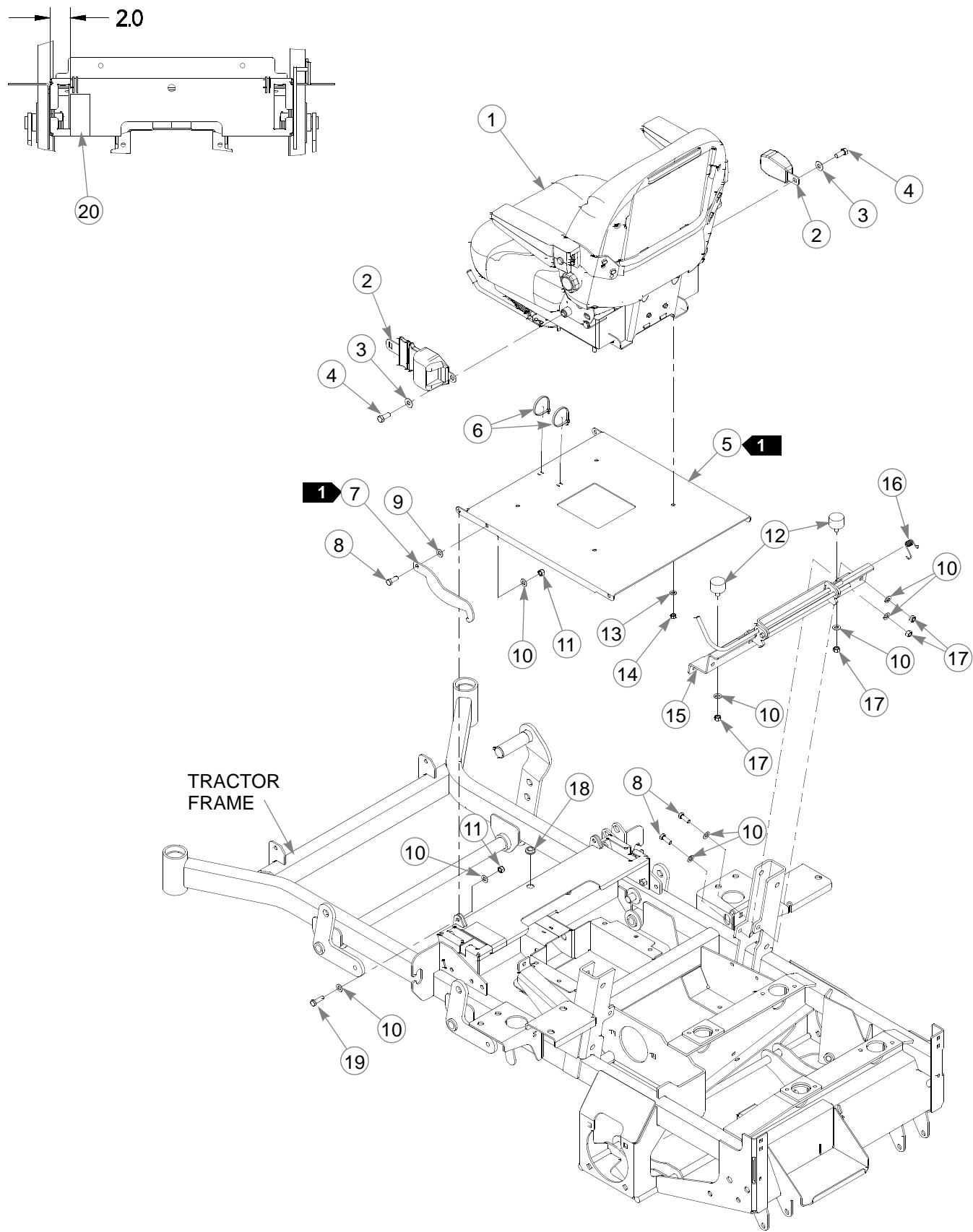
INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	055749	055749	4	CS .437-14X1.750 HX G5
2	061101	061101	2	NT .750-10 HXZY NL
3	025296	025296	4	FW .760X 1.625X.08 ZNYC
4	051169	051169	2	CS .750-10X3.000 HX G5
5	704643	704643	8	NT .437-14 HX FLG ZN

NOTES:

1. Install front deck hanger chains in lower holes only.



Seat Installation



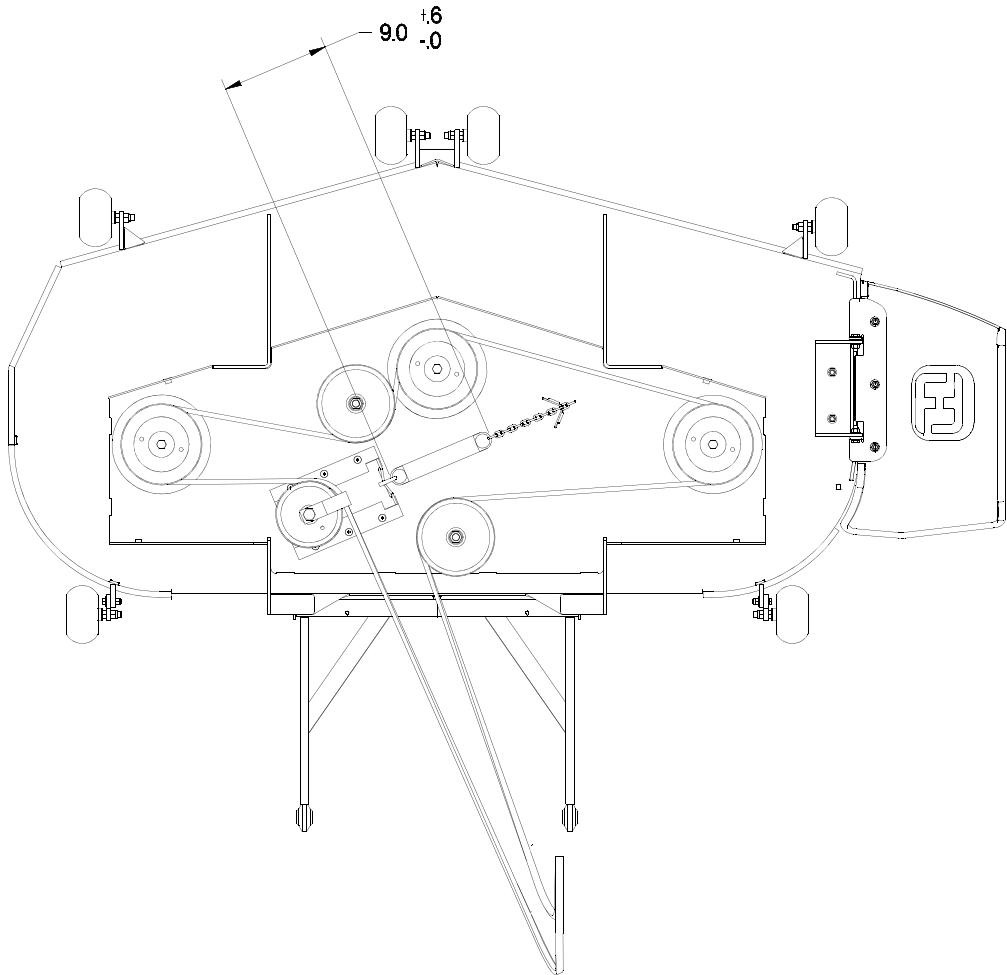
Seat Installation

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	792051	792051	1	MICHIGAN SUSPENSION SEAT
2	601444	601444	1	SEAT BELT
3	017129	017129	2	FW .440X 1.000X.083 ZNY
4	797076	797076	2	CS .437-20X1.00 HXG8ZNYC
2	549188	109106	1	SEAT PAN HDZ
6	000331	000331	2	WIRE TIE SMALL/SHORT
7	350421	350421	1	SEAT PAN STOP
8	036244	036244	5	CS .375-16X1.000 HX G5
9	724716	724716	1	FIBER WASHER
10	767954	767954	15	FW .406X .812 X.060 SAE
11	086660	086660	3	NT .375-16 HXZY NL
12	601650	601650	2	VIBRATION MOUNT
13	768523	768523	4	FW .343X.687X.051/.080H
14	034272	034272	4	NT .312-18 HX G5 ZNYC
15	109684	109684	1	SEAT CATCH W/A
16	795583	795583	1	TORSION SPRING - DIESEL
17	054502	054502	6	NT .375-16 HX GRD 5 ZNY
18	080358	080358	1	GM .50X1.00X.75X.12
19	052860	052860	2	CS .375-16X1.250 HX G5
20	722199	722199	1	SCOTCH POLYURETH 2"

NOTES:

1. Must pivot freely.
2. Service part number includes decals; see "Tractor Decals" on page 9-2.

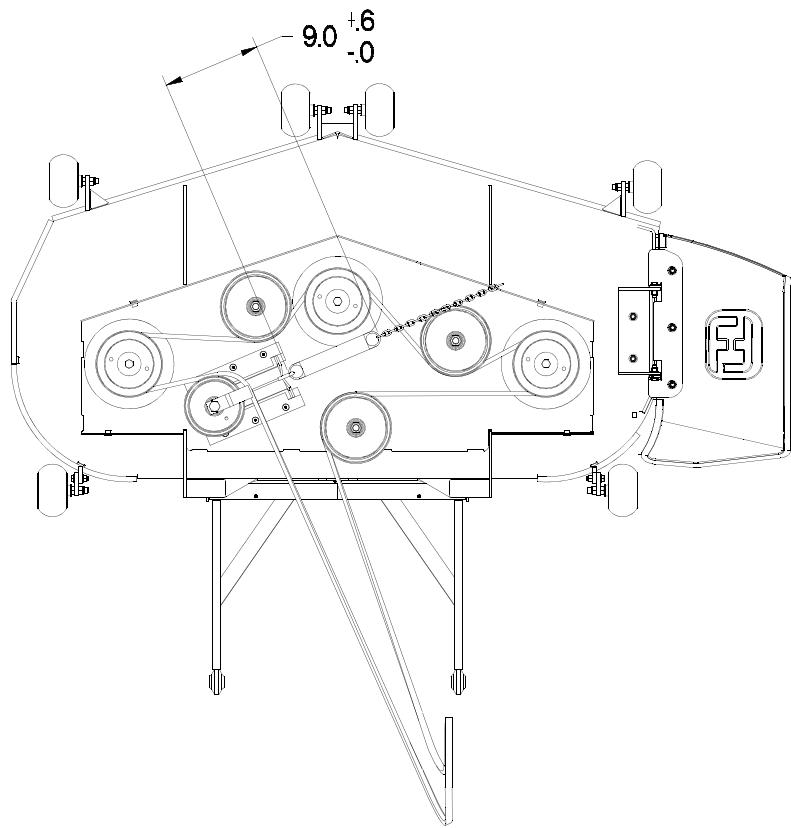
72", 66" & 54" Side Disch. Deck Belt Routing/Tensioning



NOTES:

1. Tension spring in deck leveling position. Measure spring from outside of hook to outside of hook. Spring length after tensioning new belt.
2. Route belt as shown.

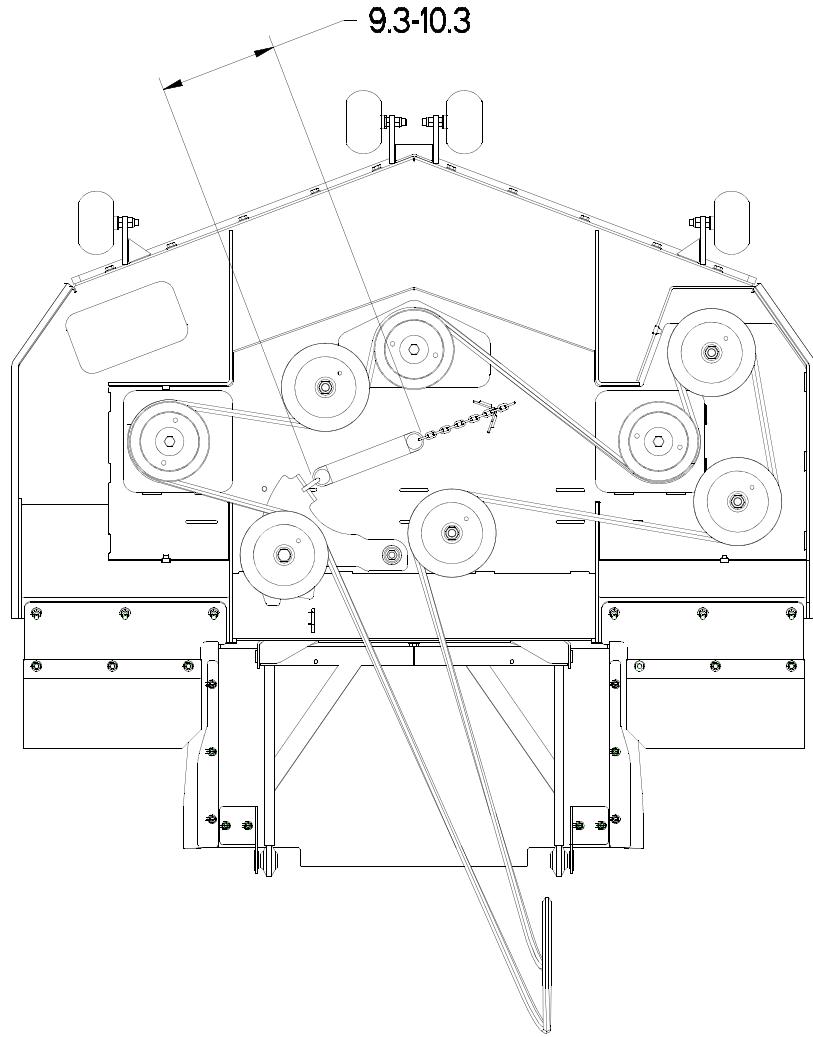
60" Side Disch. XR7 Deck Belt Routing/Tensioning



NOTES:

1. Spring length after tensioning belt. Measure spring from outside of hook to outside of hook.
2. Route belt as shown.

72", 60" & 54" Rear Discharge Deck Belt Routing/Tensioning



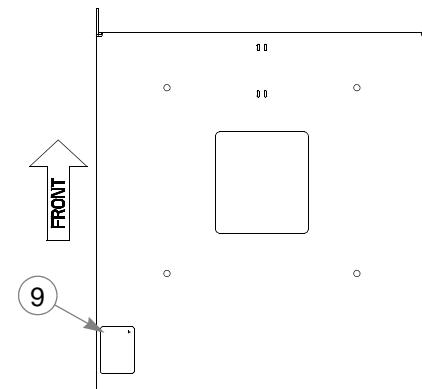
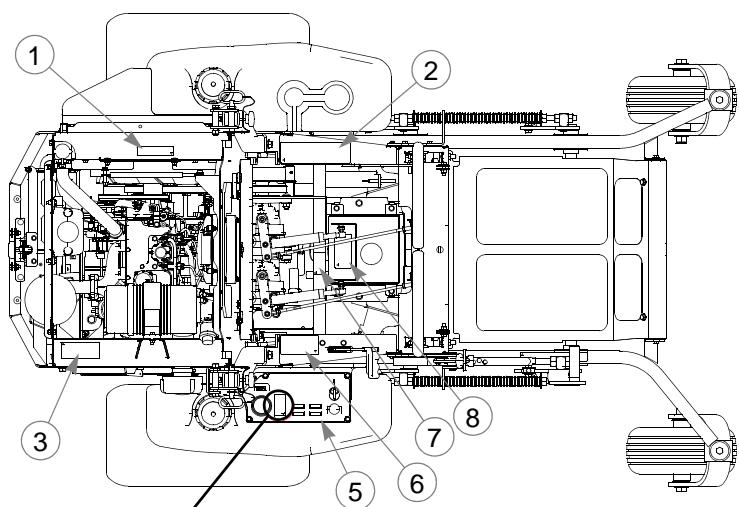
NOTES:

1. Tension spring in deck leveling position. Measure spring from outside of hook to outside of hook. Spring length after tensioning new belt.
2. Route belt as shown.

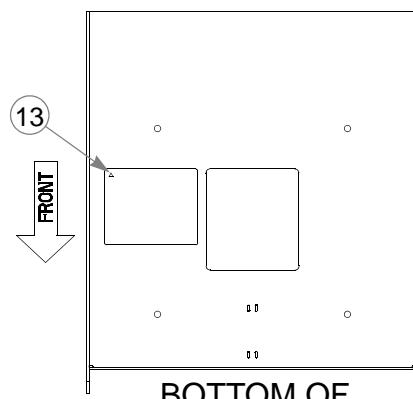
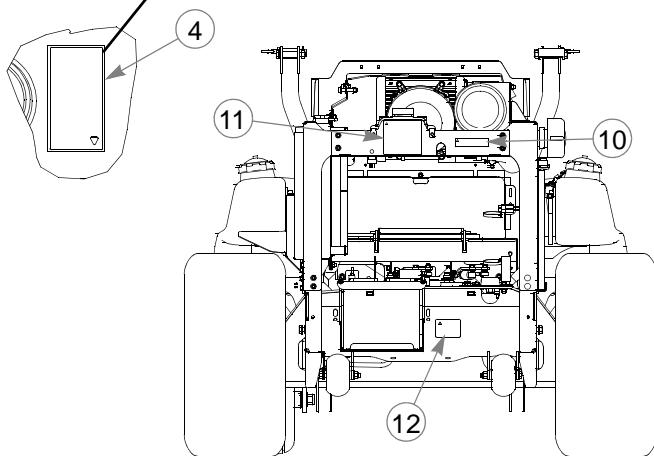
Chapter 9 Contents

Tractor Decals	9-2
72" Side Discharge XR7 Deck Decals.....	9-4
66" Side Discharge XR7 Deck Decals.....	9-5
60" Side Discharge XR7 Deck Decals.....	9-6
54" Side Discharge XR7 Deck Decals.....	9-7
72" Rear Discharge Deck Decals	9-8
60" Rear Discharge Deck Decals	9-9
54" Rear Discharge Deck Decals	9-10

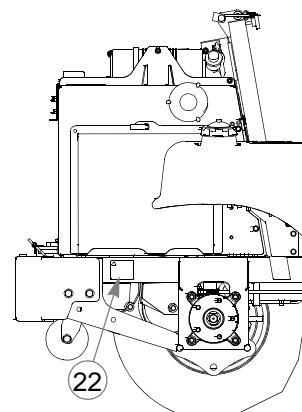
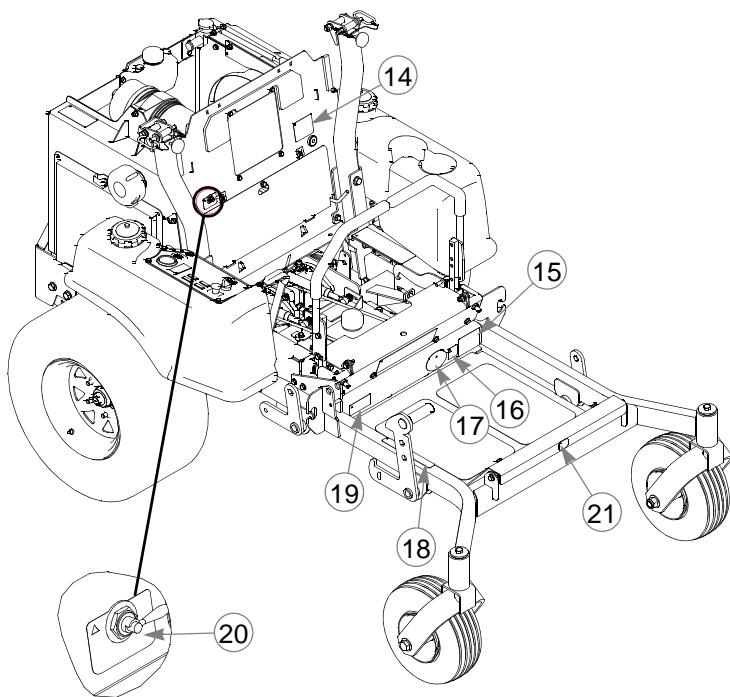
Tractor Decals



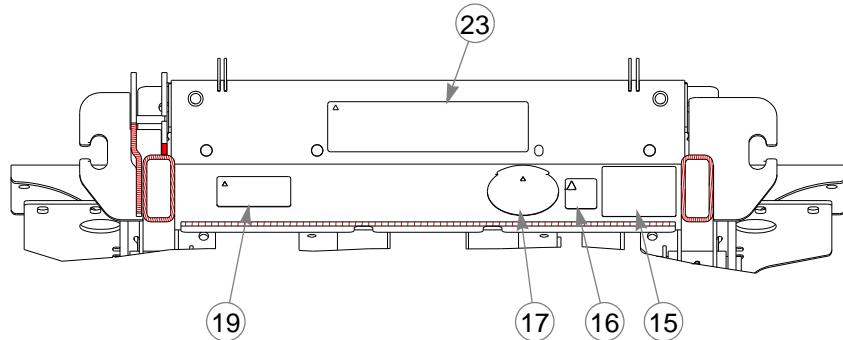
TOP OF SEAT PAN



BOTTOM OF SEAT PAN



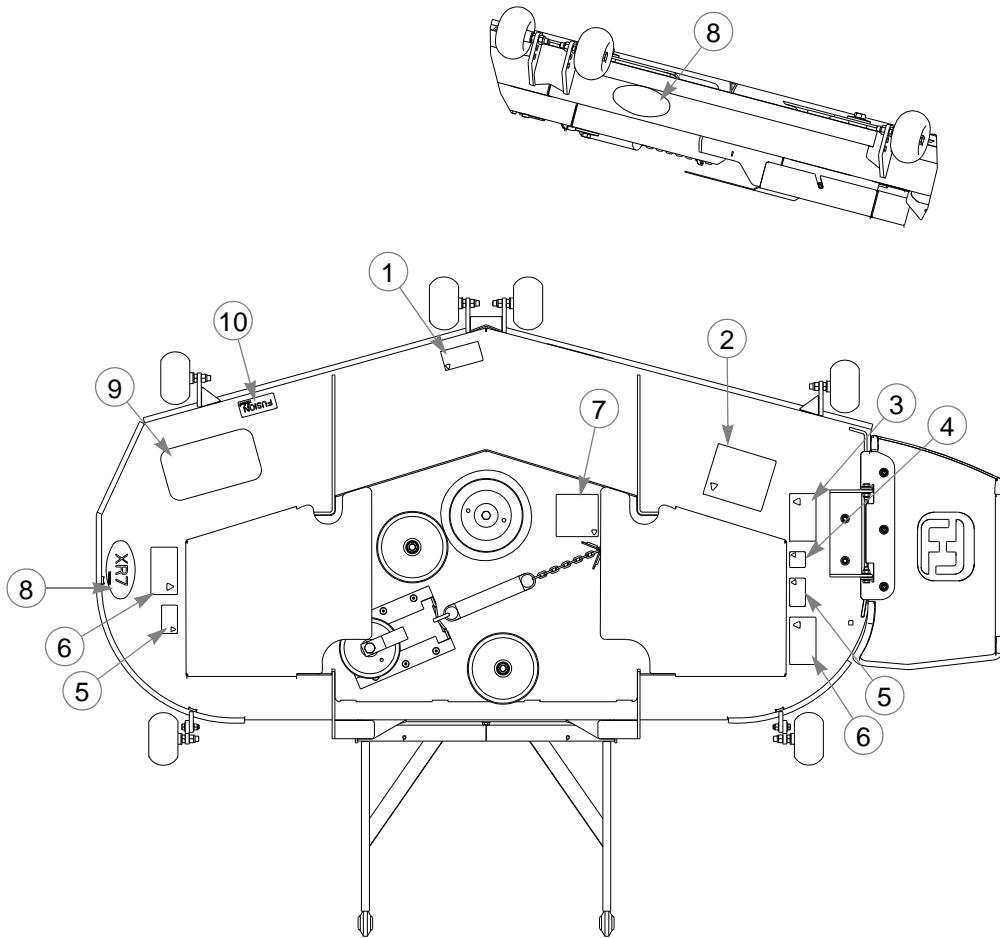
Tractor Decals



INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	763805	763805	1	FAN FINGER WARNING DECAL
2	785121	785121	1	OPERATION RIGHT DECAL
3	788968	788968	1	ENGINE COMPARTMENT DECAL
4	601374	601374	1	FUEL GAUGE DECAL
5	601372	601372	1	INSTRUMENT PANEL DECAL HDZ
6	600899	600899	1	PUMP BELT WARNING DECAL
7	727008	727008	1	HYD PRESSURE DECAL
8	779280	779280	1	HOT & HYD OIL DECAL
9	785188	785188	1	Z ARMREST WARNING DECAL
10	727818	727818	1	HOT DECAL
11	727016	727016	1	BATTERY DECAL
12	771436	771436	1	STABILIZER DECAL
13	782128	782128	1	Z SERVICE DECAL
14	601377	601377	1	CHECK ENG OIL DECAL
15	N/A	083279	1	SERIAL NO PLATE TURF
16	727172	727172	1	'MADE IN U.S.A.' DECAL
17	782573	782573	1	FIRST ZERO TURN DECAL
18	781427	781427	1	DECK HEIGHT INDICATOR DECAL
19	600941	600941	1	PATENTS DECAL
20	601246	601246	1	FUEL VALVE DECAL
21	793588	793588	1	HUSTLER NAME PLATE
22	601596	601596	1	BELT ROUTING DECAL
23	786426	786426	1	HUSTLER Z ID DECAL

NOTES:

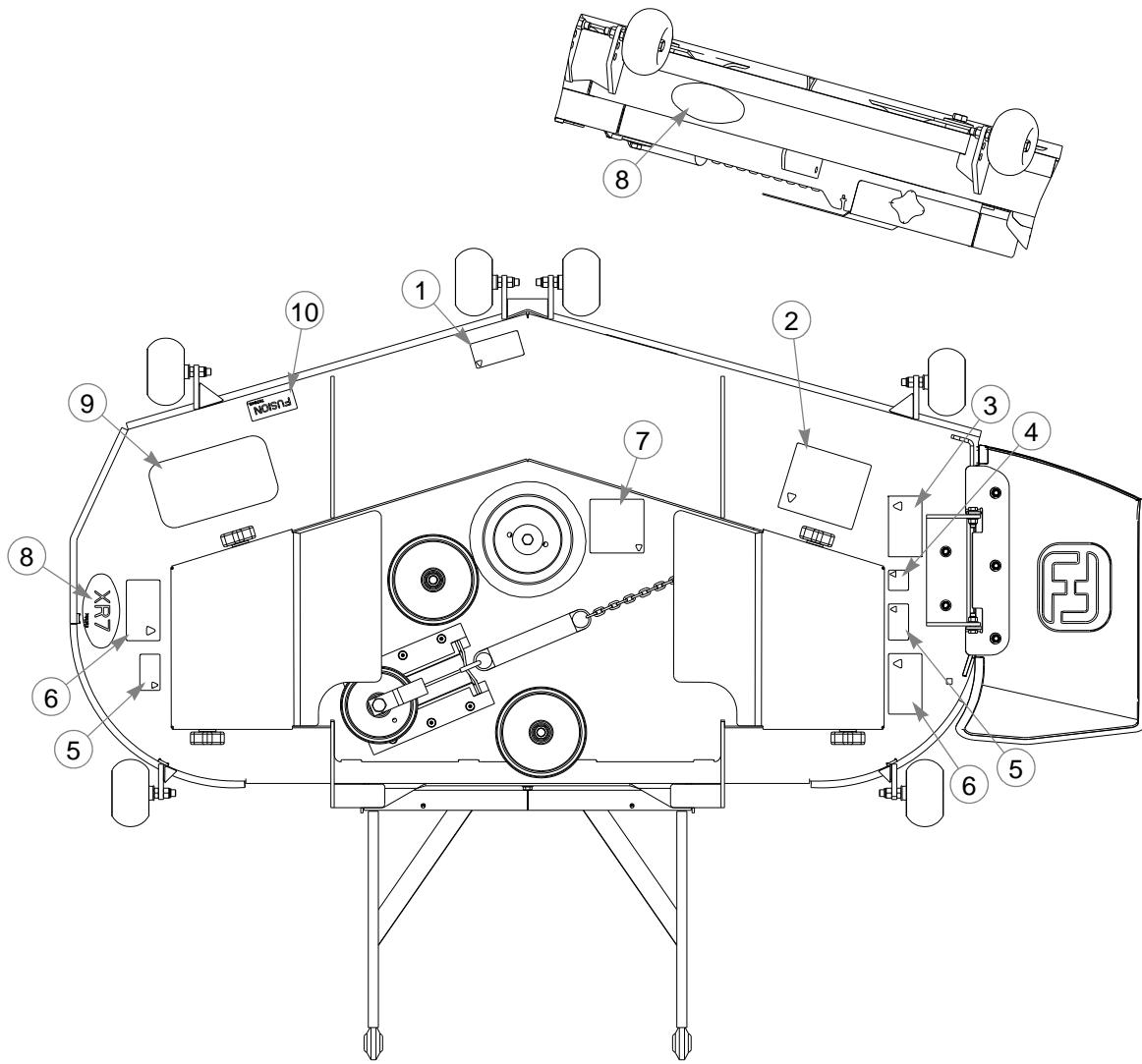
72" Side Discharge XR7 Deck Decals



INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	786285	786285	1	72" SIDE DISCHARGE DECK ID DECAL
2	760637	760637	1	MOWER DECK QUICK REFERENCE DECAL
3	727420	727420	1	DEFLECTOR SHIELD DECAL
4	727172	727172	1	"MADE IN U.S.A." DECAL
5	727453	727453	2	BELT & PULLEY DECAL
6	727438	727438	2	WHIRLING BLADES DECAL
7	601597	601597	1	BELT ROUTING DECAL
8	799353	799353	2	DECK XR7 ID DECAL
9	359547	359547	1	5.00 X 9.00 STEP TREAD
10	797845	797845	1	FUSION DECAL

NOTES:

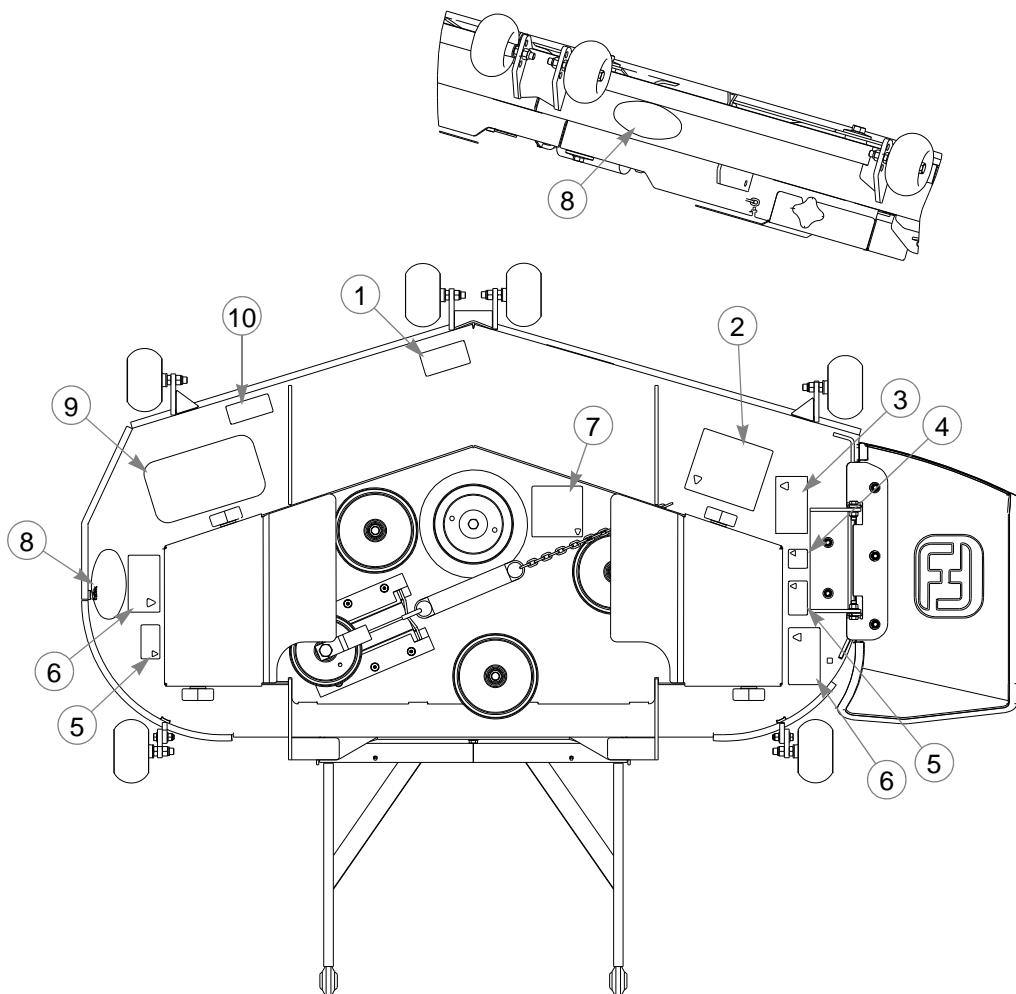
66" Side Discharge XR7 Deck Decals



INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	799189	799189	1	66" SIDE DISCHARGE DECK ID DECAL
2	760637	760637	1	MOWER DECK QUICK REFERENCE DECAL
3	727420	727420	1	DEFLECTOR SHIELD DECAL
4	727172	727172	1	"MADE IN U.S.A." DECAL
5	727453	727453	2	BELT & PULLEY DECAL
6	727438	727438	2	WHIRLING BLADES DECAL
7	601597	601597	1	BELT ROUTING DECAL
8	799353	799353	2	DECK XR7 ID DECAL
9	359547	359547	1	5.00 X 9.00 STEP TREAD
10	797845	797845	1	FUSION DECAL

NOTES:

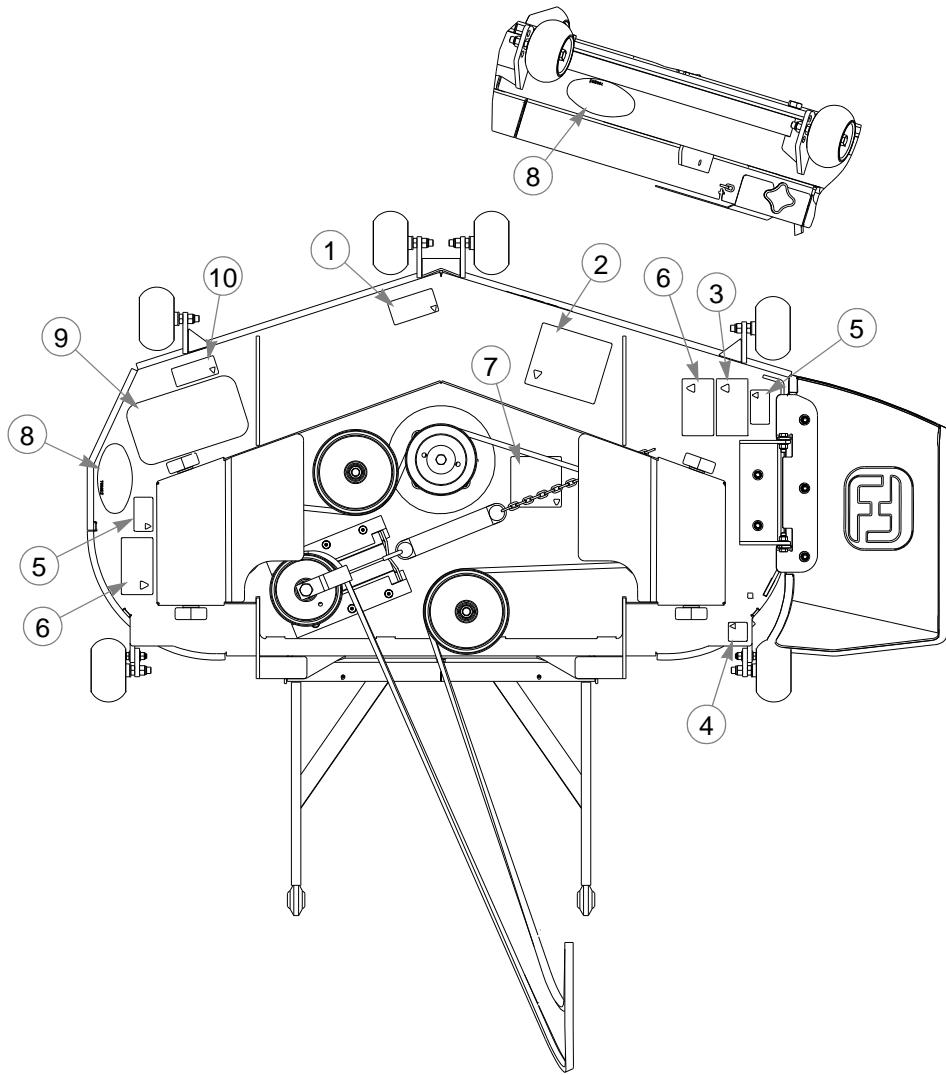
60" Side Discharge XR7 Deck Decals



INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	786277	786277	1	60" SIDE DISCHARGE DECK ID DECAL
2	760637	760637	1	MOWER DECK QUICK REFERENCE DECAL
3	727420	727420	1	DEFLECTOR SHIELD DECAL
4	727172	727172	1	"MADE IN U.S.A." DECAL
5	727453	727453	2	BELT & PULLEY DECAL
6	727438	727438	2	WHIRLING BLADES DECAL
7	601597	601597	1	BELT ROUTING DECAL
8	799353	799353	2	DECK XR7 ID DECAL
9	359547	359547	1	5.00 X 9.00 STEP TREAD
10	797845	797845	1	FUSION DECAL

NOTES:

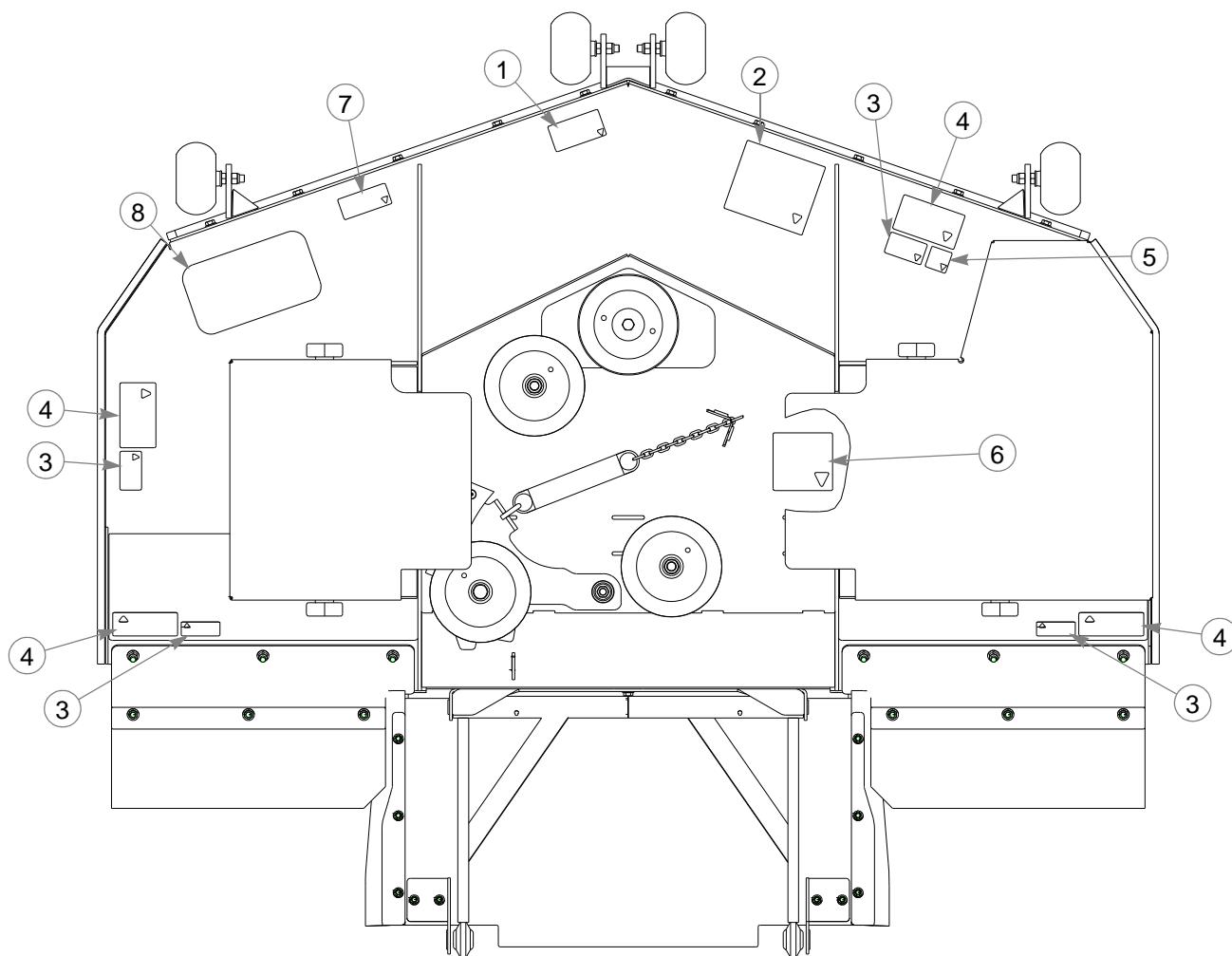
54" Side Discharge XR7 Deck Decals



INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	799171	799171	1	54" SIDE DISCHARGE DECK ID DECAL
2	760637	760637	1	MOWER DECK QUICK REFERENCE DECAL
3	727420	727420	1	DEFLECTOR SHIELD DECAL
4	727172	727172	1	"MADE IN U.S.A." DECAL
5	727453	727453	2	BELT & PULLEY DECAL
6	727438	727438	2	WHIRLING BLADES DECAL
7	781419	781419	1	BELT ROUTING DECAL
8	799353	799353	2	DECK XR7 ID DECAL
9	359547	359547	1	5.00 X 9.00 STEP TREAD
10	797845	797845	1	FUSION DECAL

NOTES:

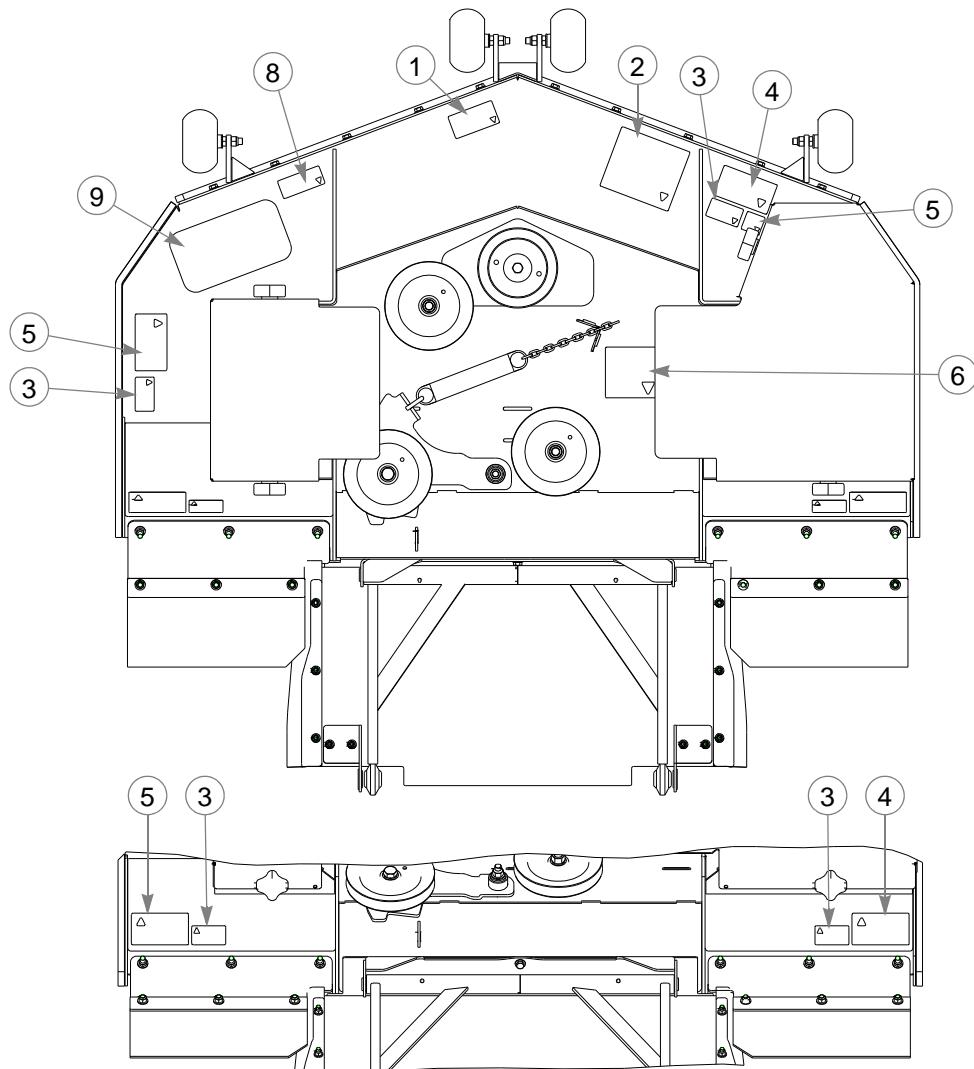
72" Rear Discharge Deck Decals



INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	786285	786285	1	72" DECK ID DECAL
2	760637	760637	1	MOWER DECK QUICK REFERENCE DECAL
3	727453	727453	4	BELT & PULLEY DECAL
4	727438	727438	2	WHIRLING BLADES DECAL
5	727172	727172	1	"MADE IN U.S.A." DECAL
6	601690	601690	1	BELT ROUTING DECAL
7	797845	797845	1	FUSION DECAL
8	359547	359547	1	5.00 X 9.00 STEP TREAD

NOTES:

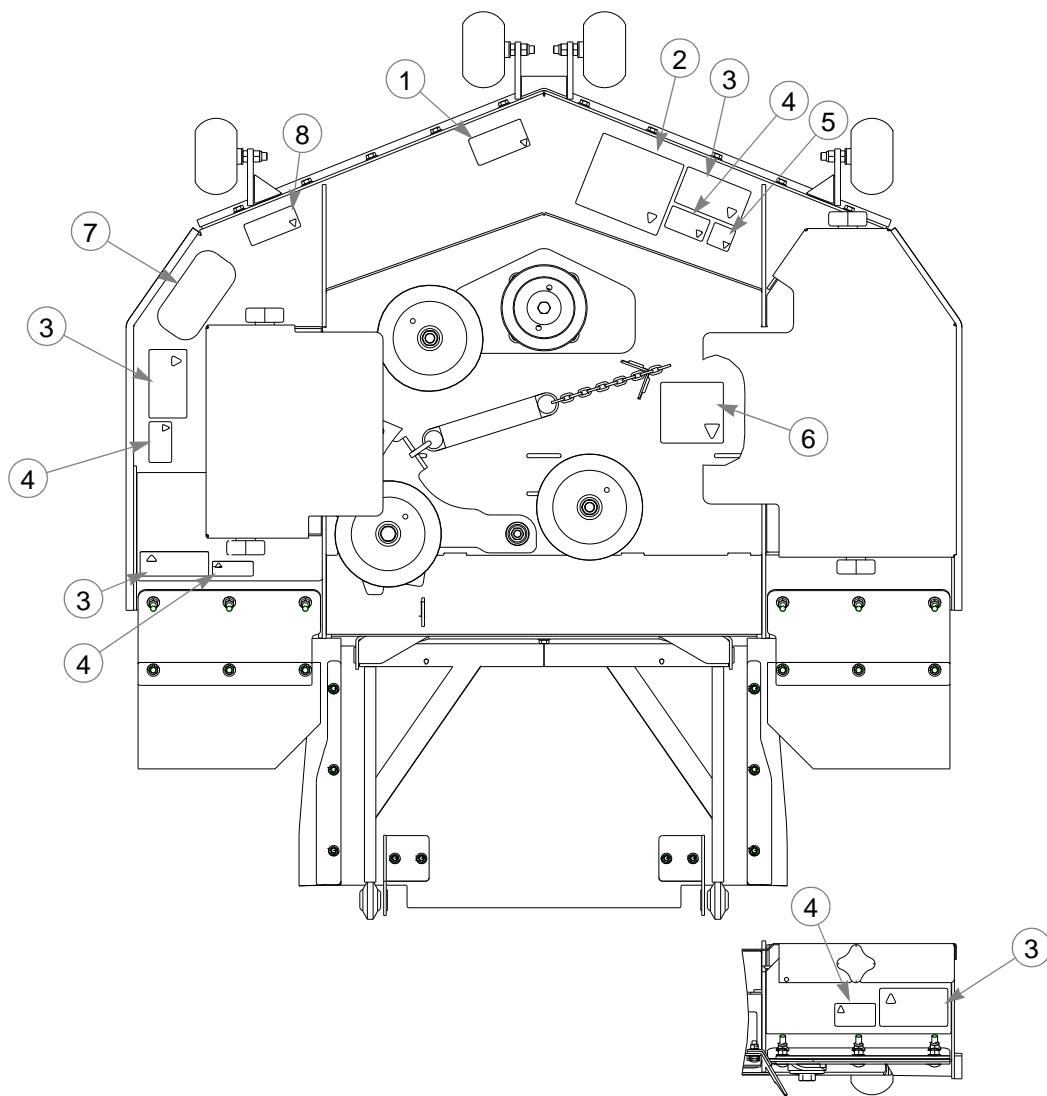
60" Rear Discharge Deck Decals



INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	786277	786277	1	60" SIDE DISCHARGE DECK ID DECAL
2	760637	760637	1	MOWER DECK QUICK REFERENCE DECAL
3	727453	727453	4	BELT & PULLEY DECAL
4	727438	727438	2	WHIRLING BLADES DECAL
5	727172	727172	1	"MADE IN U.S.A." DECAL
6	601690	601690	1	BELT ROUTING DECAL
7	797845	797845	1	FUSION DECAL
8	359547	359547	1	5.00 X 9.00 STEP TREAD

NOTES:

54" Rear Discharge Deck Decals



ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	799171	799171	1	54" REAR DISCHARGE DECK ID DECAL
2	760637	760637	1	DECAL MOWER DECK QUICK REFERENCE
3	727438	727438	4	DECAL WHIRLING BLADES
4	727453	727453	4	DECAL BELT & PULLEY
5	727172	727172	1	DECAL 'MADE IN U.S.A.'
6	601690	601690	1	REAR DISCHARGE DECK ROUTING DECAL
7	794503	794503	1	STEP TREAD DECAL
8	797845	797845	1	FUSION DECAL

NOTES:

Chapter 10 Contents

Assembly Pictures and Aids	10-3
General Information for all models	10-3
Wire harness and cable routings	10-4
Fuel lines.....	10-6
Hydraulic routing.....	10-8
Engine oil hose routing	10-9
 Maintenance & Adjustment Safety.....	10-10
Safe Maintenance & Adjustment Practices.....	10-10
Using a ramp.....	10-11
Safety and Instruction Decals	10-11
 Maintenance	10-14
Introduction.....	10-16
General engine maintenance	10-16
Torque values	10-16
Tires	10-16
Hour meter	10-17
Lubrication	10-17
Electrical system.....	10-18
Access to engine and hydraulic pumps	10-19
Hydraulic system.....	10-19
Fuel system.....	10-21
Engine oil and filter	10-23
Changing the oil	10-23
Oil Removal From The Engine Breather Valve System ..	10-24
Engine air filter	10-24

Belt replacement	10-27
Mower blade maintenance	10-28
Mower blade removal	10-29
Adjustment	10-30
Introduction	10-30
Steering linkage	10-30
Control Lever Neutral Adjustment	10-30
Control lever stops	10-31
Steering dampener	10-32
Control lever adjustment	10-33
Park brake spring adjustment	10-33
Hydraulic pump belt adjustment	10-34
Deck drive belt adjustment	10-34
Engine RPM setting	10-35
Deck leveling and height adjustment	10-35

Assembly Pictures and Aids

General Information for all models

Instrument panel and wire connections (FIG. 1).

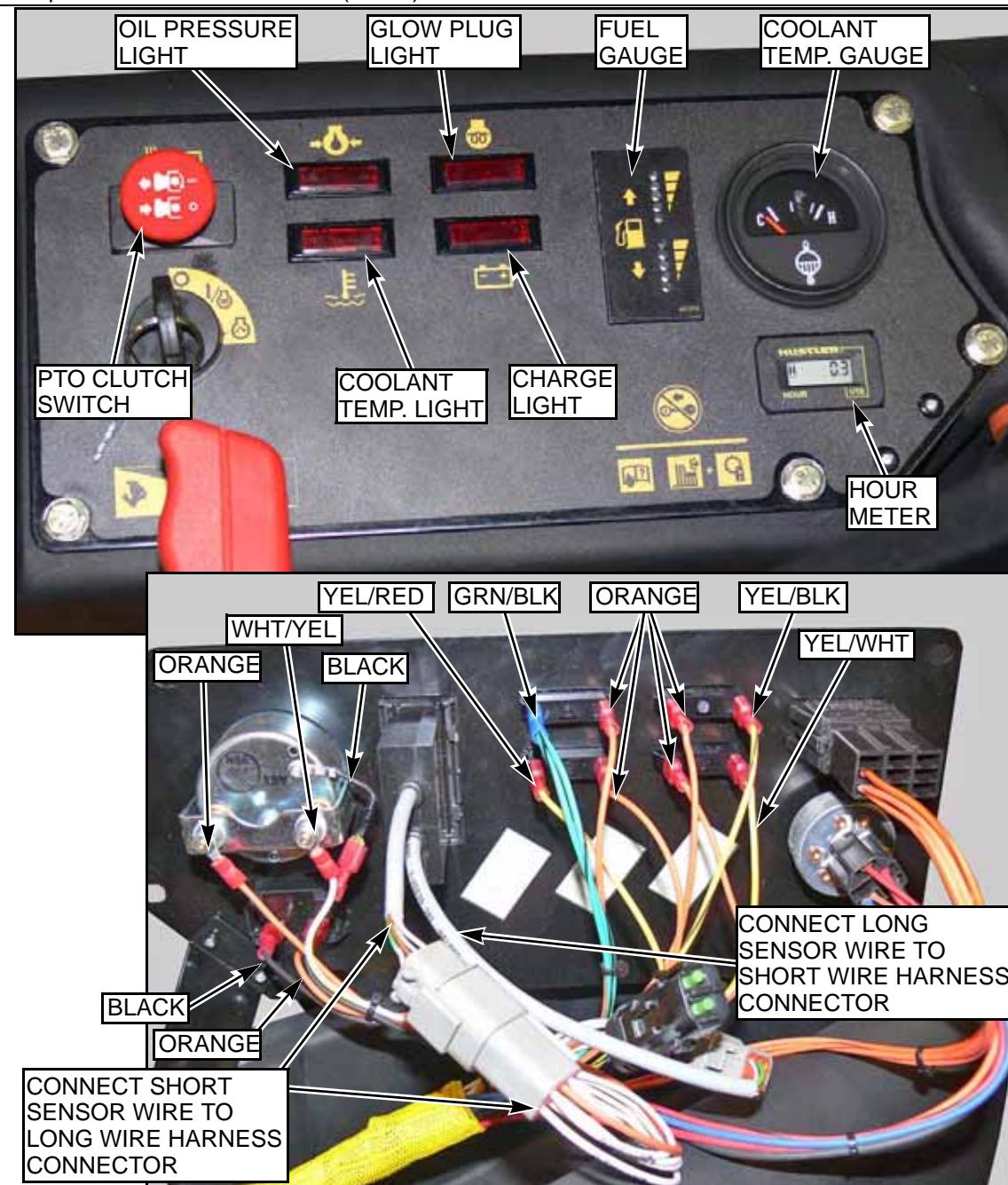


FIG. 1

Oil Pressure Light	Orange	Yellow w/ Black stripe
Glow Plug Light	Orange	Green w/ Black stripe
Coolant Temperature Light	Orange	Yellow w/ White stripe
Charge Light	Orange	Yellow w/ Red stripe
Hour Meter	Orange	Black
Coolant Temperature Gauge	Orange ring & Black spade	White w/ Yellow stripe ring

PTO clutch wire routing (FIG. 2 & FIG. 3)

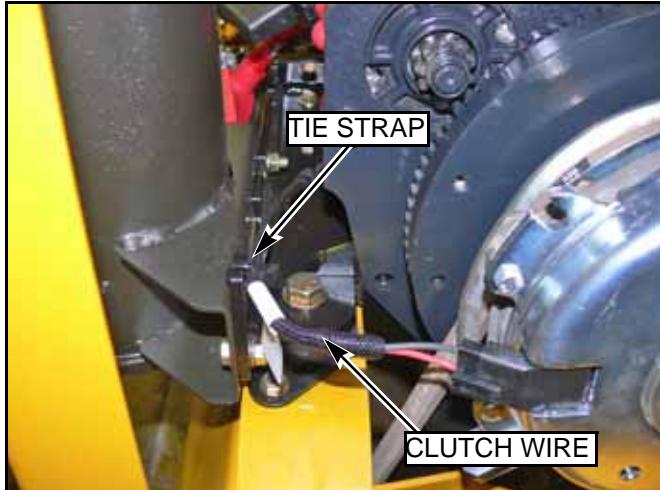


FIG. 2

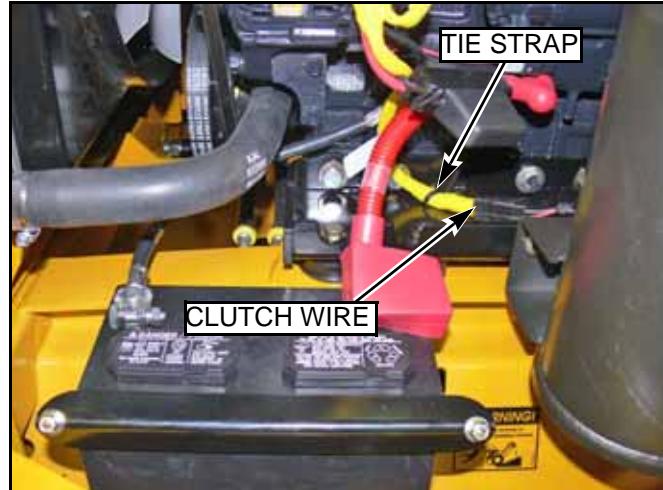


FIG. 3

Orient the hose clamp on the air filter to engine hose so that it is accessible for maintenance (FIG. 4). Orient the pre-cleaner cap with the vent notch facing downward and away from the operator (FIG. 5).

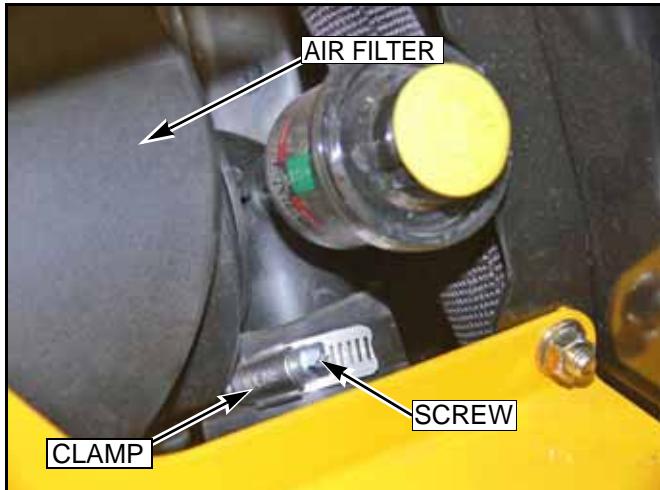


FIG. 4

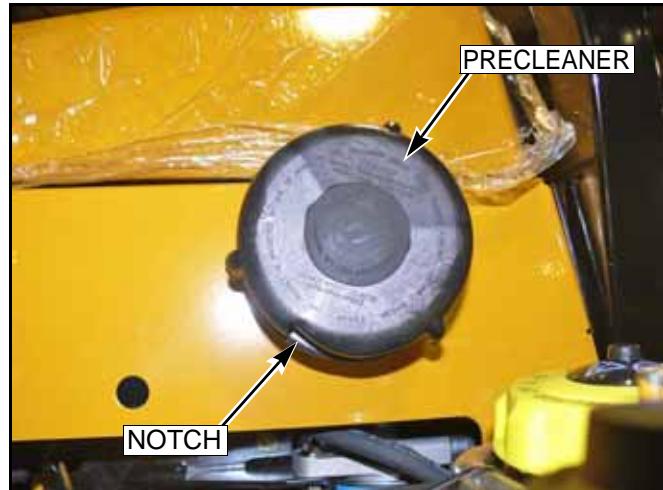


FIG. 5

Wire harness and cable routings

Battery cable connections (FIG. 6 & FIG. 7).

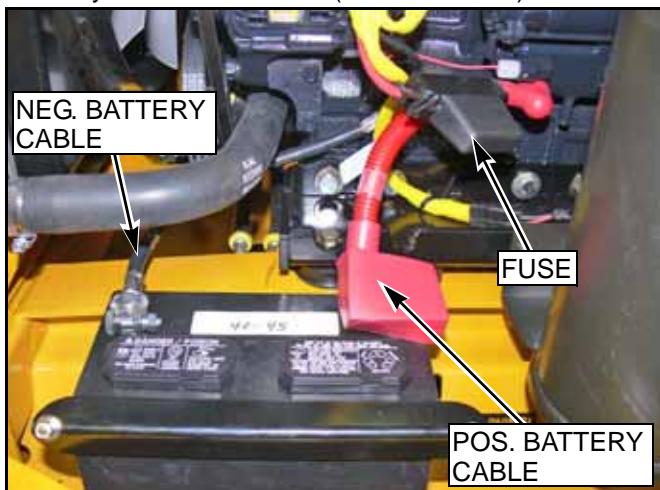


FIG. 6

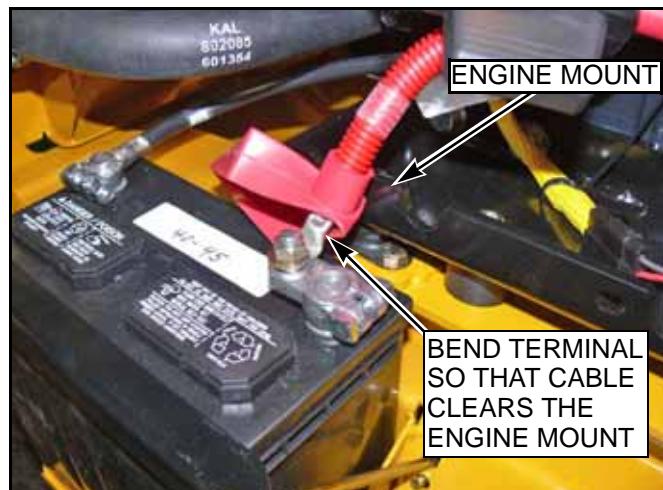


FIG. 7

Fuel sensors and wire harness routing (FIG. 8, FIG. 9 & FIG. 10)

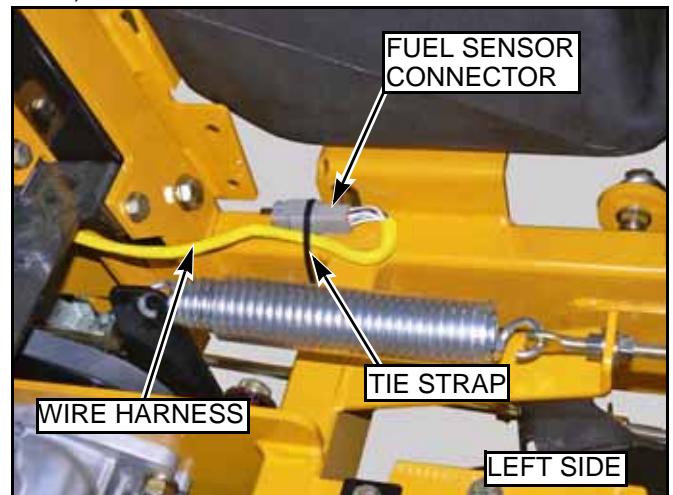
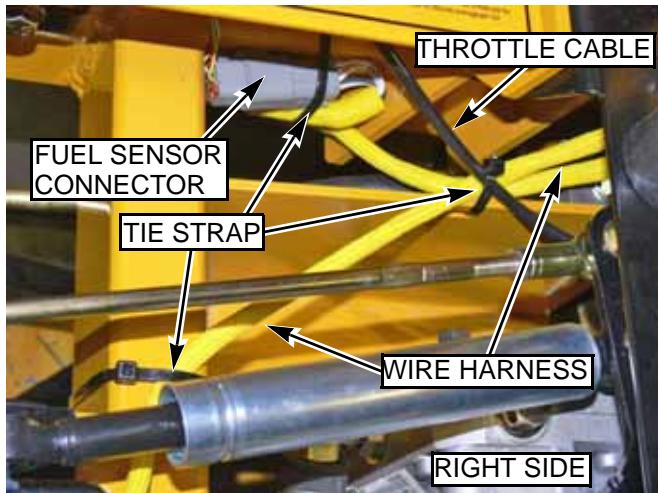


FIG. 8

FIG. 9

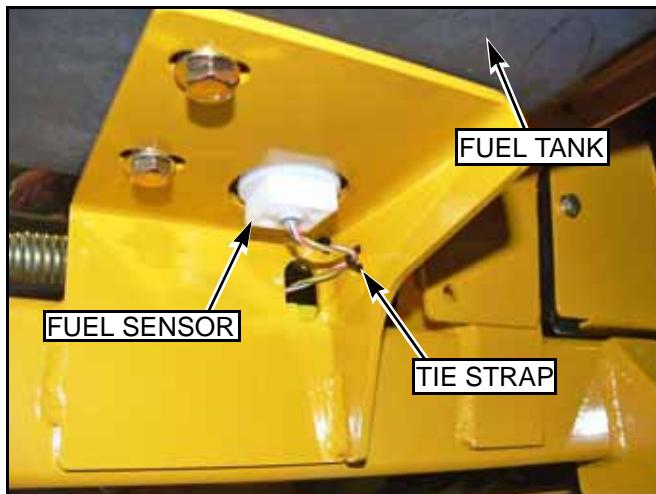


FIG. 10

Oil cooler and wire harness routing (FIG. 11 & FIG. 12).

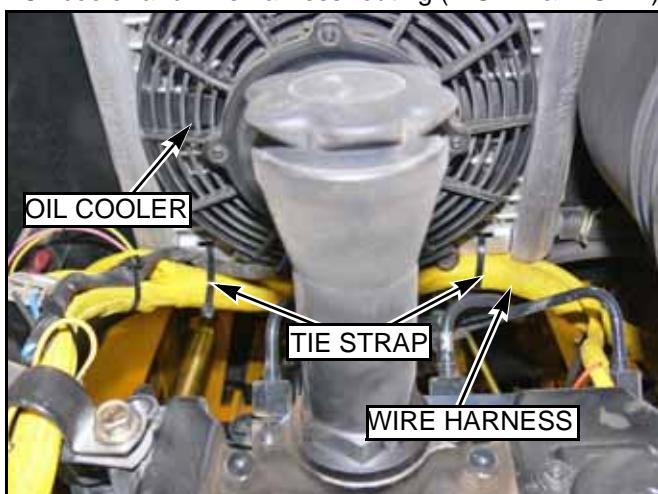


FIG. 11

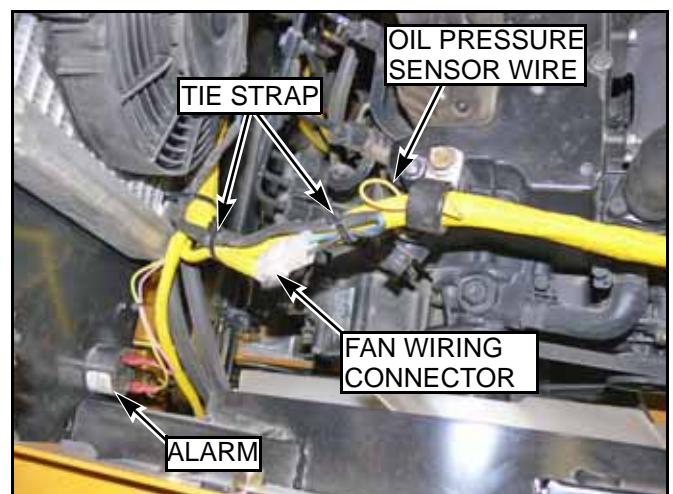


FIG. 12

Throttle cable connection (FIG. 14).



FIG. 13

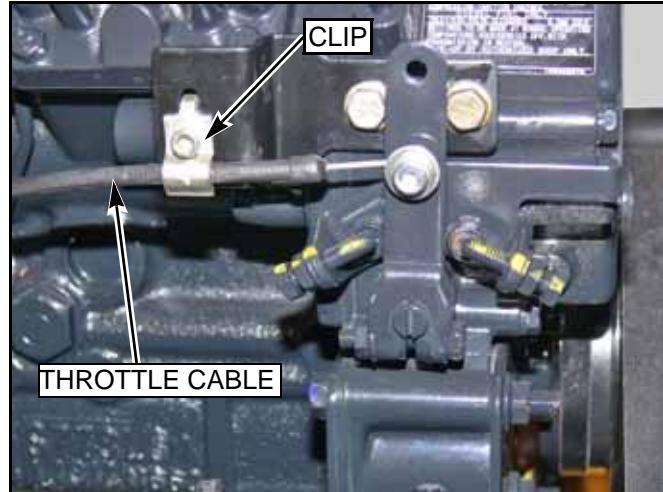


FIG. 14

Fuel lines

Fuel priming bulb (with arrow facing up) and right side fuel line routing (FIG. 15 & FIG. 16)

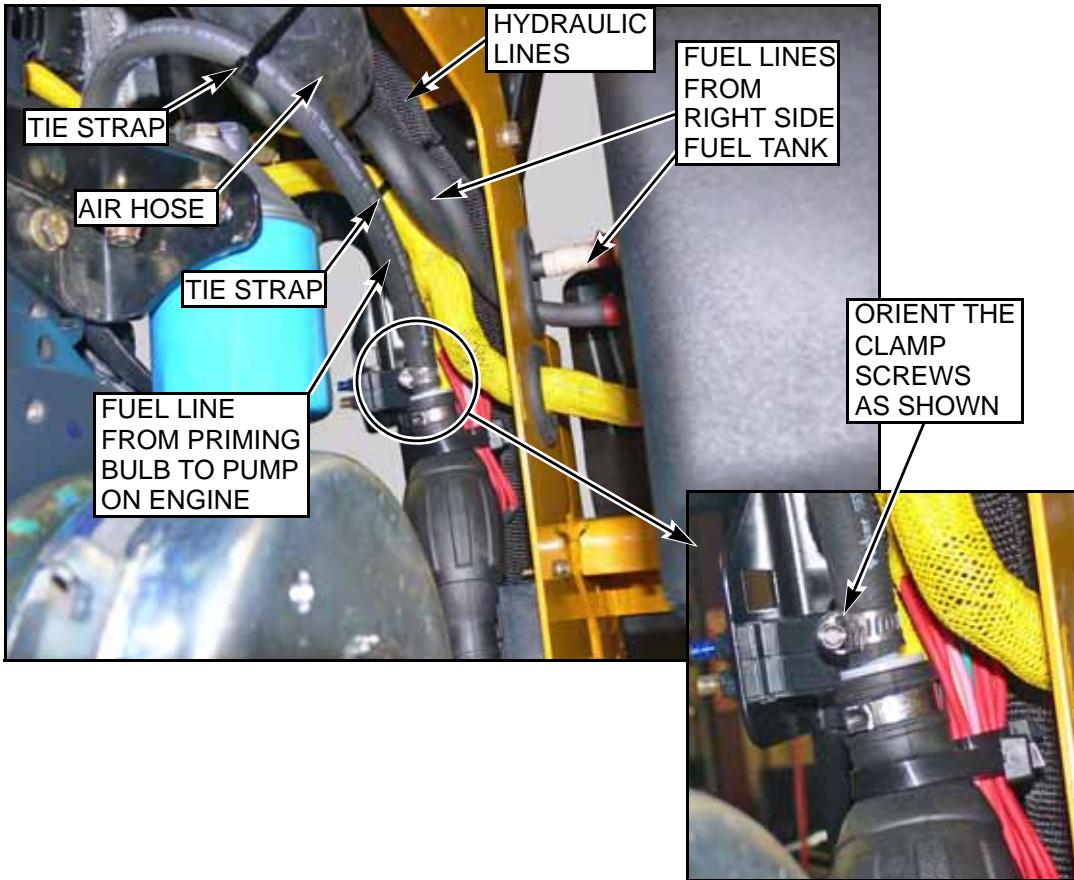


FIG. 15

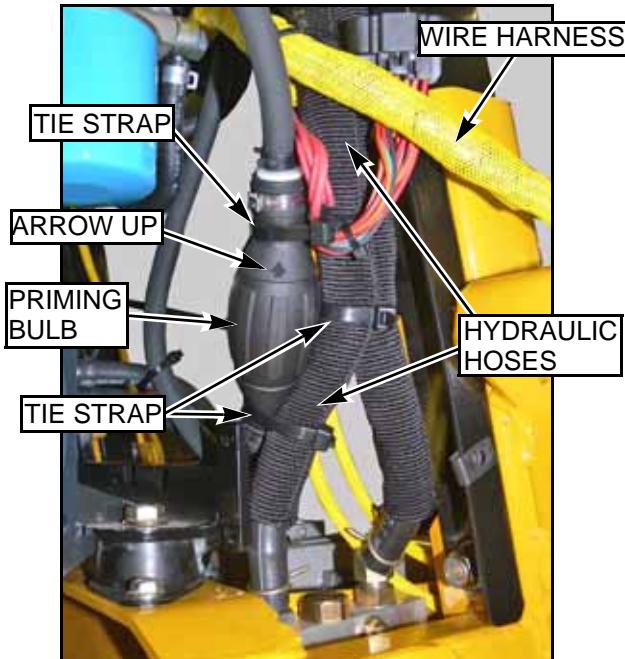


FIG. 16

Left side fuel line routing (FIG. 17 & FIG. 18)

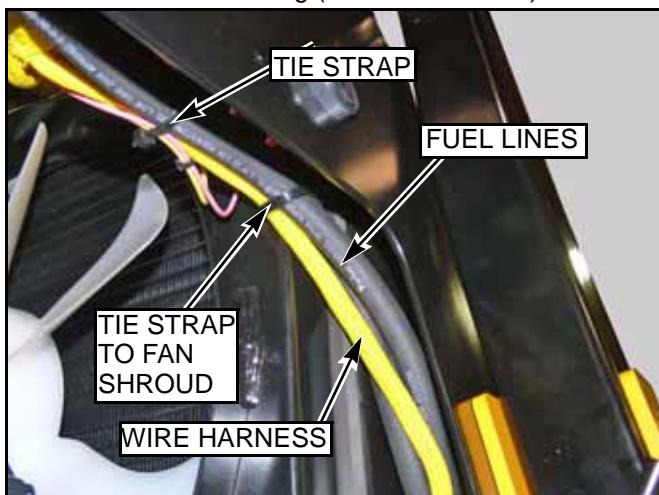


FIG. 17

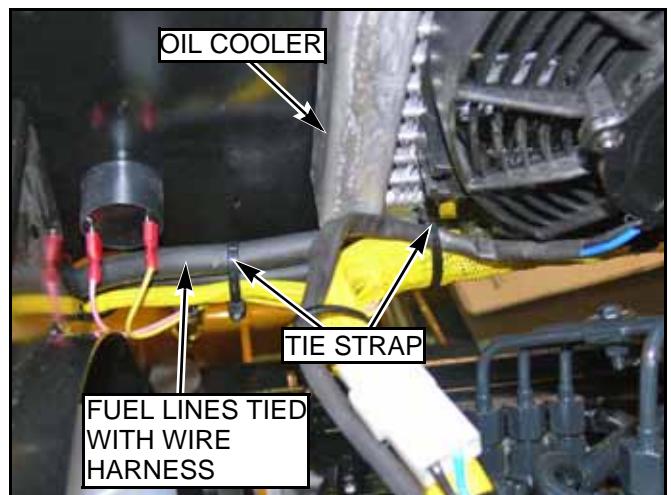


FIG. 18

Fuel valve and fuel filter (FIG. 19 & FIG. 20)

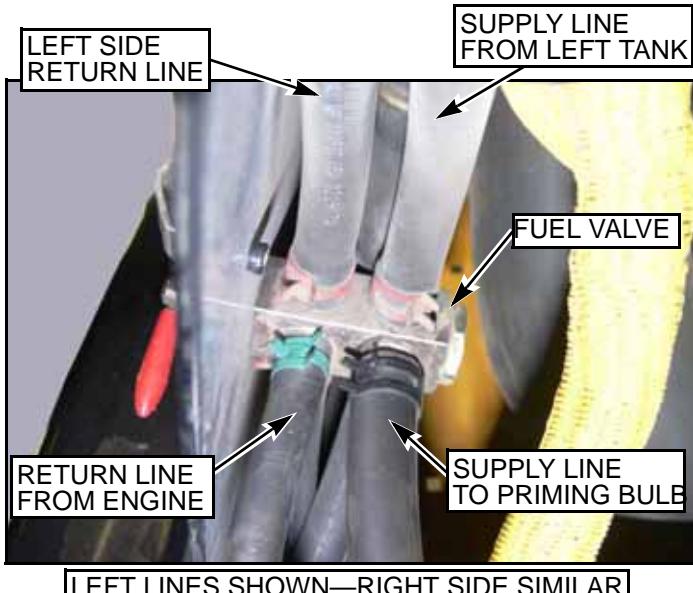


FIG. 19

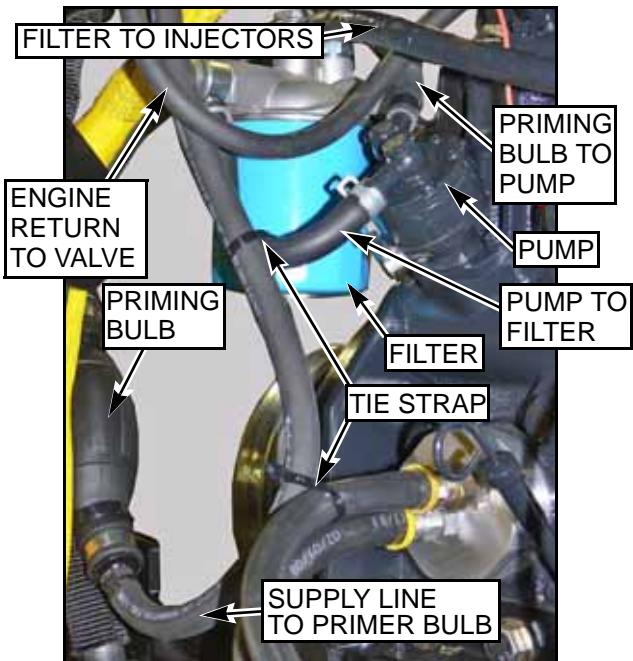


FIG. 20

Hydraulic routing

Hydraulic hose routings (FIG. 21, FIG. 22 & FIG. 23)

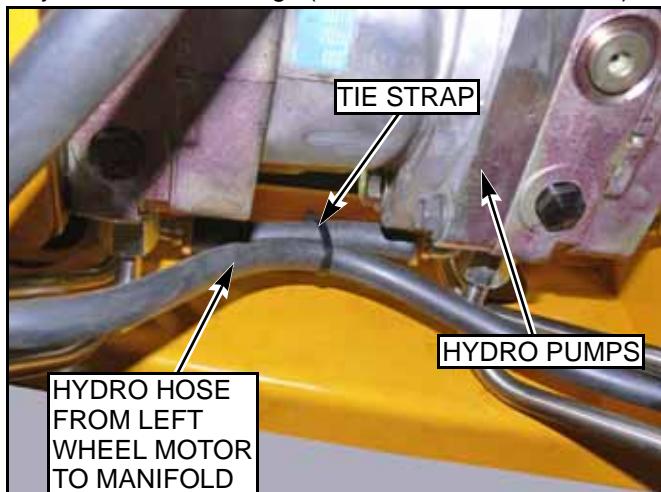


FIG. 21

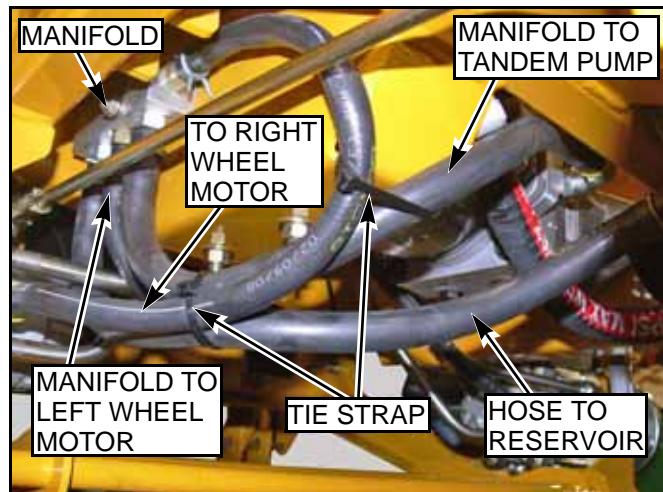


FIG. 22



FIG. 23

Engine oil hose routing

Route engine oil hoses behind the seat latch & through clamp to remote filter at rear of tractor (FIG. 24 & FIG. 25)

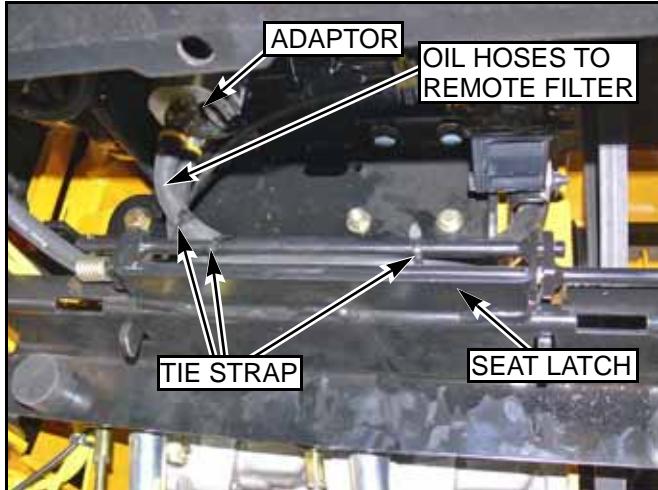


FIG. 24

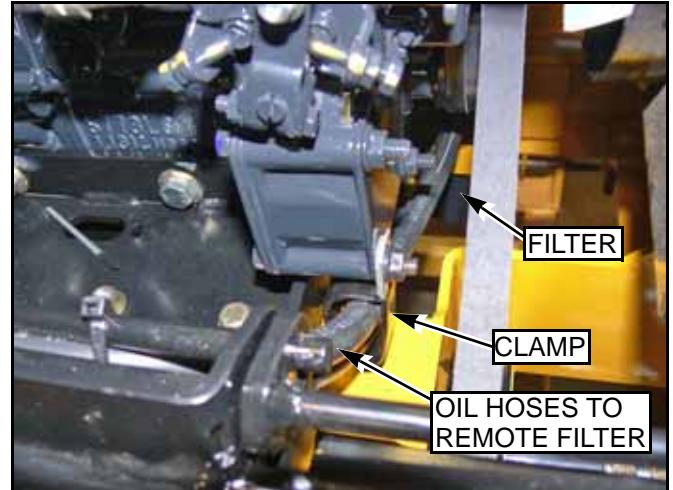


FIG. 25

Maintenance & Adjustment Safety



This safety alert symbol is used to call attention to a message intended to provide a reasonable degree of PERSONAL SAFETY for operators and other persons during the normal operation and servicing of this equipment.

DANGER—denotes immediate hazards which **WILL** result in severe personal injury or death.

WARNING—denotes a hazard or unsafe practice which **COULD** result in severe personal injury or death.

This manual uses two other words to highlight information. **IMPORTANT** calls attention to special mechanical information and **NOTE:** emphasizes general information worthy of special attention.

All operators should read this manual, or be instructed about safe operating and maintenance procedures. This is the owner's responsibility.

Improper use or maintenance by the operator, mechanic, or owner can result in injury. To reduce the potential for injury, comply with these safety instructions and always pay attention to the safety alert ▲ symbol, which means DANGER or WARNING—“personal safety instructions.” Failure to comply with the instructions may result in personal injury or death.

Incorrect usage of this machine may result in severe injury. Personnel operating and maintaining it should be trained in the proper use and should read the manuals completely and thoroughly before attempting to set-up, operate, adjust, or service this machine.

The Quick Reference Decals, located to the left of the seat, are designed to give the operator/mechanic brief information needed in the daily operation and service of the machine. These decals are not intended to be used in place of this manual but instead is to be used as an extension of this manual. These decals should not be removed or obliterated. Replace these decals if they become unreadable.

It is the **owner's responsibility** to make certain that the operator/mechanic reads and understands this manual and all decals before operating this machine. It is also the **owner's responsibility** to make certain that the operator/mechanic is a qualified and physically able individual, properly trained in the operation of this equipment. Local regulations may restrict the age of the operator/mechanic.

The owner should also ensure that the operator/mechanic knows that they are responsible for their own safety as well as the safety of other persons within the vicinity. **Remember**, the operator/mechanic is responsible for accidents or hazards occurring to other people or their property.

Safe Maintenance & Adjustment Practices

This product is capable of amputating hands and feet and throwing objects. Always follow all safety instructions to avoid serious injury or death.

▲ Unless specifically required, **DO NOT** have engine running when servicing or making adjustments to tractor. Place control levers in the park brake position, disengage deck clutch, remove ignition switch key and disconnect the negative battery cable. Repairs or maintenance requiring engine power should be performed by trained personnel only. To prevent carbon monoxide poisoning, be sure proper ventilation is available when engine must be operated in an enclosed area.

▲ Follow daily and weekly checklists, making sure hoses are tightly secured and bolts are tightened.

▲ Keep your machine clean and remove any deposits of trash and clippings, which can cause engine fires and hydraulic overheating as well as excessive belt wear. Clean up oil or fuel spillage. Allow machine to cool before storing.

▲ **Clean flammable material from machine. Prevent fires by keeping engine compartment, battery, hydraulic lines, fuel line, fuel tank and operator's station clean of accumulated trash, grass clippings, and other debris. Always clean up spilled fuel and oil.**

▲ Always wear adequate ear protection, such as earplugs, when operating this equipment as prolonged exposure to uncomfortable or loud noises can cause impairment or loss of hearing. Do not wear radios or music headphones while operating the machinery. Safe operation requires your full attention.

▲ Never put hands or feet under any part of the machine while it is running.

- ▲ Except when changing or checking belt, **always** keep belt covers on mower for safety as well as cleanliness.
- ▲ Stop the engine before removing the grass catcher or unclogging the discharge chute. Never clear the discharge chute with the engine running. Turn off the engine and be sure the blades have stopped before cleaning. Use a stick to clear a plugged discharge area. **Never use your hand!**
- ▲ Exercise caution when loading or unloading the machine onto a trailer or truck.
- ▲ Always wear safety goggles or safety glasses with side shields when operating the mower.
- ▲ Never leave machine unattended with ignition key in switch, especially with children present.
- ▲ Be alert and turn the machine off if children enter the area.
- ▲ Always wear adequate eye protection when servicing the battery, hydraulic system, cooling system or when grinding mower blades and removing accumulated debris.
- ▲ Use extra caution when handling gasoline and other fuels. They are flammable and vapors are explosive.
- ▲ Never refuel tractor while engine is running; never refuel near an open flame or near devices which can create a spark. Refuel outdoors preferably, or in well ventilated areas.
- ▲ Never attempt to start engine when there is a strong odor of gasoline fumes present. Locate and correct cause.
- ▲ Never run the engine in an enclosed area unless exhaust is vented to the outside. Exhaust gases contain carbon monoxide which is odorless and deadly poison.
- ▲ Never attempt to make any adjustments or repairs to the tractor drive system, mower deck or any attachment while the tractor engine is running or deck clutch is engaged. Repairs or maintenance requiring engine power should be performed by trained personnel only.
- ▲ Never work under the machine or attachment unless it is safely supported with jack stands. Make certain machine is secure when it is raised and placed on the jack stands. The jack stands should not allow the machine to move when the engine is running and the drive wheels are rotating. **Use only certified jack stands.** Use only appropriate jack stands, with a minimum weight rating of 2000 pounds to block the unit up. Use in pairs only. Follow the instructions supplied with the vehicle stands.
- ▲ Before working on or under the deck, make certain engine cannot be accidentally started. Shut engine off and remove ignition switch key for maximum safety. Repairs or maintenance requiring engine power should be performed by trained personnel only.
- ▲ Use a stick or similar instrument to clean under the mower making sure that no part of the body, especially arms and hands are under mower.
- ▲ Exercise caution when working under the deck as the mower blades are extremely sharp. Wearing gloves or wrapping the blade(s) is advisable when working around or with the blades.
- ▲ Do not touch hot parts of machine.
- ▲ Keep nuts and bolts tight, especially the blade attachment bolts. Keep equipment in good condition.
- ▲ Never tamper with safety devices. Check their proper operation regularly.
- ▲ Grass collection system components are subject to wear, damage and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with manufacturer's recommended parts, when necessary.
- ▲ Use only genuine Hustler replacement parts to ensure that original standards are maintained

Using a ramp

- ▲ Use extreme caution when loading and unloading a unit with a ramp.
- ▲ Use only a single, full width ramp; do not use individual ramps for each side of the unit. Having a full width ramp provides a surface for the tractor frame to contact if the unit starts to tip backwards. It also reduces the risk of a wheel going off and the machine tipping over.
- ▲ Do not exceed a 15 degree angle between the ramp and the ground or between the ramp and the trailer or truck.
- ▲ When on a ramp avoid sudden acceleration

Safety and Instruction Decals

- ▲ Specific safety warning decals are located on the equipment near the immediate areas of potential hazards. These decals should not be removed or obliterated. Replace them if they become non-readable.

The following illustrations show the various **decals** that are located on the machine. A brief explanation, for those requiring one, is shown to help the operator understand the meanings of these decals.

Read Owner's Manual and Quick Reference Decal before attempting to operate this machine.



Part Number
727016

Avoid skin contact with battery acid.

Always wear eye protection when checking the battery, acid can cause serious injury to skin and eyes. If contact occurs, flush area with clean water and call physician immediately. Acid will also damage clothing.

Do not allow open flame near the battery when charging.

Hydrogen gas forms inside the battery. This gas is both toxic and flammable and may cause an explosion if exposed to flame. Always remove the negative ground first and replace it last.

Do not overfill battery.

Electrolyte may overflow and damage paint, wiring or structure. When cleaning the battery, use soap and water. Be careful not to get soap and water into the battery. Use soda mixed in water to clean corrosion off the terminals.

Do not remove or modify stabilizer wheels or rear engine guard or injury can result.



Part Number
771436



Part Number
788968

Keep engine and pump compartment(s) clean (especially in exhaust area) to prevent fire and provide maximum engine and hydraulic cooling.



Do not smoke while refueling.

Do not fill tank with engine running, or while the engine is hot.

Allow engine to cool before storing machine inside a building.

Store away from open flame or spark if there is fuel in tank.

Clean up any gasoline spills.

Do not refuel while in enclosed trailer or other enclosed areas.



Part Number
727420

Never operate the mower deck with side deflector removed or in raised position, except when the grass catcher attachment is being used.



Part Number
727438

Whirling blades! Keep hands and feet away.
Beware of thrown objects.



Part Number
727453

Keep shields or covers in place while machine is in operation.
Keep hands away from rotating pulleys and belts.



Part Number
600899

If you lose steering control while operating the machine, place the steering control levers in the park brake position immediately. Inspect the machine and involve your Hustler dealer to resolve the problem before continuing to operate.

If pump belt fails, steering control will be lost. Refer to owner's manual for inspection and replacement intervals and refer to above paragraph for emergency procedures.



Part Number
727008

Hydraulic fluid escaping under pressure can penetrate skin.

Hydraulic fluid may also cause infection in a minor cut or opening in the skin; if exposed to hydraulic fluid, see a doctor at once.

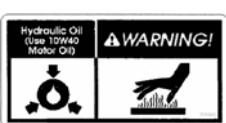
Before applying pressure to hydraulic system, make sure all connections are tight and all hoses and lines are in good condition.

Relieve all pressure in the system before disconnecting or working on hydraulic lines.

To find a leak under pressure, use a piece of cardboard or wood—never use your hands.

To relieve all pressure in system, turn engine off.

Hot surface!



Part Number
779280

Hot surface!



Part Number
727818

Maintenance

Maintenance Locator Chart

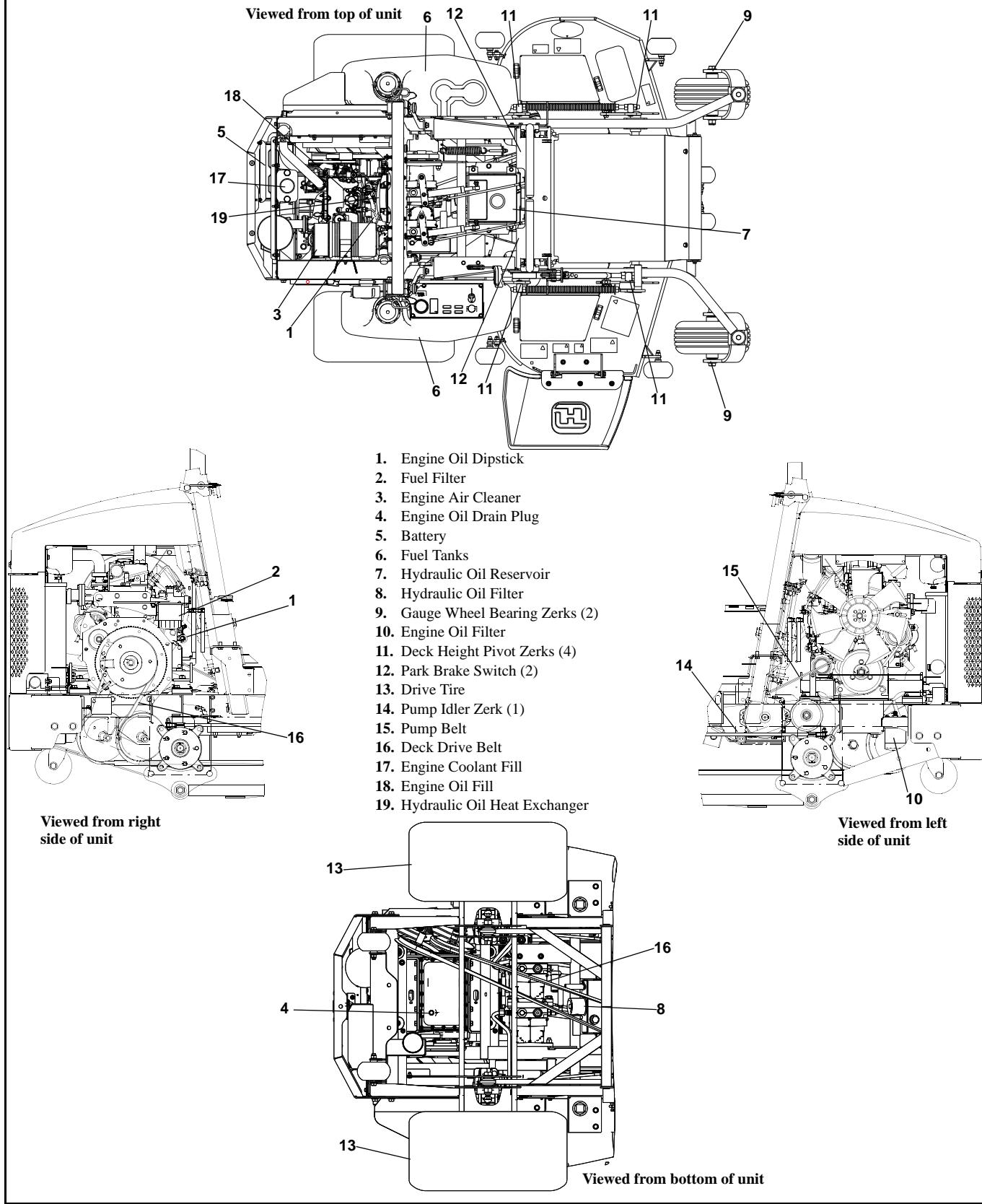


FIG. 26

SERVICE AT INTERVALS INDICATED	WEEKLY OR 50 HOURS	MONTHLY OR 100 HOURS	ANNUALLY OR 500 HOURS
Verify safety start interlock system		Daily	
Visually inspect unit for loose hardware and/or damaged parts		Daily	
Visually inspect tires		Daily	
Check oil level, engine (1)		Daily or every 4 hours	
Clean air intake screen (5)		Daily or every 4 hours	
Check fuel level		Daily	
Blades - sharpen & securely fastened		Daily	
Discharge chute - securely in place & in lowest position		Daily	
Clean engine and pump compartment		Daily	
Replace air cleaner paper element (5)		As needed	
Grease deck idler	X		
Grease deck pusher arms	X		
Grease pump idler	X		
Grease deck height pivots	X		
Grease gauge wheel bearings	X		
Change engine oil and filter (1) (4)	X		
Clean cylinder and head fins(a)	X		
Check battery connections	X		
Check tire pressure with a gauge	X		
Check hydraulic oil level	X		
Clean engine exterior (a)	X		
Clean & regap spark plugs (a)		X	
Check pump and deck belt tension and condition (6)		X	
Check fuel and hydraulic lines (7)		X	
Check fuel valve and grommet (7)		X	
Tighten lug nuts on wheels (2)		X	
Change fuel filter			X
Clean or replace hydraulic fill cap			X
Change hydraulic oil and filter (3)			X
Grease deck spindle housings			X
Replace spark plugs			X

NOTES:

1. Initial oil change is after 50 hours of operation. Thereafter, change oil after every 250 hours operation. Change more often under dusty or dirty conditions and during hot weather periods.
2. Torque initially and after first 2 hours of operation.
3. Perform initial hydraulic filter change after 50 hours (one week) of operation.
4. Change engine oil filter per the engine manufacturer's recommendations. Refer to Engine Owner's Manual for recommendations and other maintenance items.
5. Service more often under dusty or dirty conditions. Use caution when servicing to prevent dust contamination in the engine. **Do not** clean filter element. Replace with a new one.
6. **Pump drive belt only - Inspect every 100 hours** and replace if worn or cracking is noticed. Otherwise, **replace every 400 hours or 2 years** whichever comes first.
7. Check fuel line hoses, fuel valve and grommets for any cracks or leaks

REFERENCES:

a --Refer to Engine Owner's Manual

NOTE: After completing maintenance cycle (500 hours), repeat cycle.

Introduction

Regular maintenance is the best prevention for costly downtime or expensive, premature repair. The following pages contain suggested maintenance information and schedules which the operator should follow on a routine basis.

Remain alert for unusual noises, they could be signaling a problem. Visually inspect the machine for any abnormal wear or damage. A good time to detect potential problems is while performing scheduled maintenance service. Correcting the problem as quickly as possible is the best insurance.

Clear away heavy build-up of grease, oil and dirt, especially in the engine and hydraulic reservoir areas; minute dust particles are abrasive to close-tolerance engine and hydraulic assemblies.

Daily inspect mower for grass clippings and wire and string tangles. The underside of the mower deck will collect a build-up of grass clippings and dirt, especially when grass is wet or has high moisture content. This build-up will harden, restricting blade and air movement and will probably show a poorer quality of cutting. Therefore it should be removed routinely.

To do this it will be necessary to raise and block the deck in the full up position, using jack stands or blocks, and scrape the build-up from underneath.

Some repairs require the assistance of a trained service mechanic and should not be attempted by unskilled personnel. Consult your Hustler service center when assistance is needed.

General engine maintenance

Detailed instructions and recommendations for break-in and regular maintenance are specified in the Engine Owner's manual. Please refer to this manual for engine servicing, lubricating oil levels with quality and viscosity recommendations, bolt torques, etc. The engine warranty is backed by the manufacturer. Special attention should be paid to applicable data which will not be duplicated here.

Torque values



WARNING: Particular attention must be given to tightening the drive wheel lug nuts, wheel motor nuts and blade spindle bolts. Failure to correctly torque these items may result in the loss of a wheel or blade, which can cause serious damage or personal injury.

Torque values are given below:

Wheel (lug) nuts	65-75 FT.-LBS.
Wheel motor nut	350-375 FT.-LBS
Blade spindle bolt top	65-75 FT.-LBS.
Blade spindle bolt bottom	118 FT.-LBS.

Lug nuts only - It is recommended that these be checked after the first 2 hours of operation, initially, every 50 hours and following removal for repair or replacement.

For all other torques refer to the various tractor parts manuals for standard torque chart.

NOTE: For engine torque values, see engine owner's manual.

Tires

It is important for level mowing that the tires have the same amount of air pressure. The recommended pressure are:

Drive Wheels	8-12 PSI
Front Wheels	8-12 PSI

Solid fill tires are not recommended for Hustler turf equipment. On any machine, with solid filled tires, the warranty claim will be denied.



WARNING: Explosive separation of a tire and rim can cause serious injury or death.

Do not attempt to mount a tire without the proper equipment and experience to perform the task. Always maintain the correct tire pressure and never over inflate. Never weld or heat a wheel and tire assembly as an explosion may occur. Welding can weaken or deform a wheel. When inflating tires stand to one side and **not** in front of or over the tire assembly. Check tires for low pressure, blemishes, damaged rims or missing lug bolts and nuts.

Hour meter

To recognize when your machine needs servicing, check the hour meter and the maintenance schedule. The hour meter shows the number of hours the engine has run, and the maintenance schedule lists the service intervals (FIG. 27).



FIG. 27

Lubrication

1. Grease the front gauge wheel bearings per the Maintenance Schedule. Use SAE multi-purpose grease.
2. Grease the four deck lift pivots, located to the side of the operator's footrest per the Maintenance Schedule. Use SAE multi-purpose grease.
3. Grease the deck idler per the Maintenance Schedule. Use SAE multi-purpose grease.
4. Grease the pump idler per the Maintenance Schedule. Use SAE multi-purpose grease.
5. Grease the two deck pusher arm pivots per the Maintenance Schedule. Use SAE multi-purpose grease.
6. Grease the blade spindle assemblies per the Maintenance Schedule. The spindle assemblies require lubrication annually. Each spindle shaft is equipped with a grease zerk located under the deck. Use no more than one or two ounces of SAE multi-purpose grease, (1 to 2 pumps on an average grease gun). Do not force lubricant into grease zerk. Bearings are sealed and do not require much lubricant.

Electrical system

The electrical system is a 12-volt, negative ground. Recommended battery size is a garden tractor BCI group 45 with 480 or better cranking AMP rating. A maintenance-free battery is recommended. Otherwise, follow battery manufacturer's maintenance, safety, storing and charging specifications. The battery is located at the rear of the tractor, FIG. 28.

The Hustler Z Shibaura Diesel tractors have a 50 amp in-line fuse in the electrical system. This is the main fuse to protect the complete electrical system. It is located at the rear of the machine close to the battery.

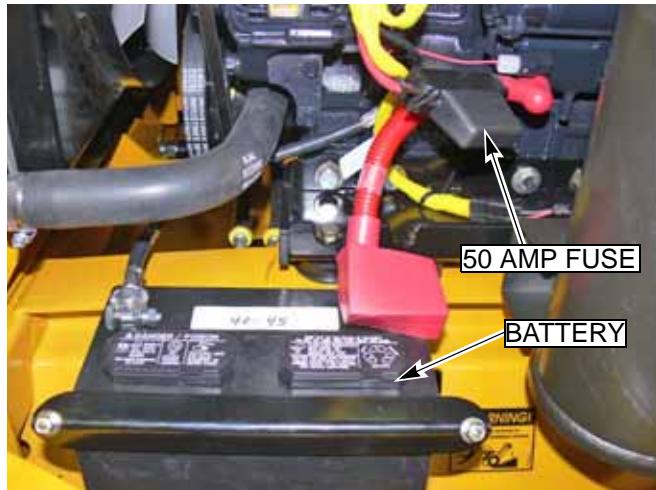


FIG. 28



WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.



WARNING: Avoid skin and clothing contact with battery acid. Always wear eye protection when checking the battery, acid can cause serious injury to skin and eyes. If contact occurs, flush area with clean water and call physician immediately. Acid will also damage clothing. Do not drink the battery electrolyte. Do not allow open flame near the battery when charging. Hydrogen gas forms inside the battery. This gas is both toxic and flammable and may cause an explosion if exposed to flame. Always remove the negative ground first and replace it last. Do not overfill battery. Electrolyte may overflow and damage paint, wiring or structure. When cleaning the battery, use soap and water. Be careful not to get soap and water into the battery. Clean the battery terminals with a solution of four parts water and one part baking soda when they become corroded.



WARNING: Shorts caused by battery terminals or metal tools touching metal tractor components can cause sparks. Sparks can cause a battery gas explosion which will result in personal injury. Prevent the battery terminals from touching any metal tractor parts when removing or installing the battery. Do not allow metal tools to short between the battery terminals and metal tractor parts.



WARNING: Incorrect battery cable routing could cause damage to the tractor and battery cables. This can cause sparks which can cause a battery gas explosion which will result in personal injury. Always **disconnect** the negative (black) battery cable before disconnecting the positive (red) cable. Always **connect** the positive (red) battery cable before connecting the negative (black) cable.

Common circuit failures are usually caused by shorting, corroded or dirty terminals; loose connections, defective wire insulation or broken wires. Switches, solenoids and ignition components may also fail, causing a shorted or open circuit.

Before attempting any failure diagnosis of the electrical system, use a test light or voltmeter to check the battery voltage. If the battery voltage is satisfactory, check the cleanliness and tightness of the terminals and ground connections. A general understanding of electrical servicing and use of basic test equipment is necessary for troubleshooting and repair.

Major overhaul or repair of the starting motor or charging system should be performed by trained technicians only.

Access to engine and hydraulic pumps

The hydraulic pumps are accessed by lifting the seat platform. The seat platform is hinged at the front. To raise it, release seat latch and tilt seat platform up and forward. The seat platform catch (FIG. 29) will prevent the seat from going all the way over. However, if more access is desired under the seat platform, the seat platform catch can be raised allowing the seat to pivot more. **Make certain to place the control arms in the park brake position and pivot the arm rests upward before placing the seat platform in the full forward position to prevent arm rest damage.**

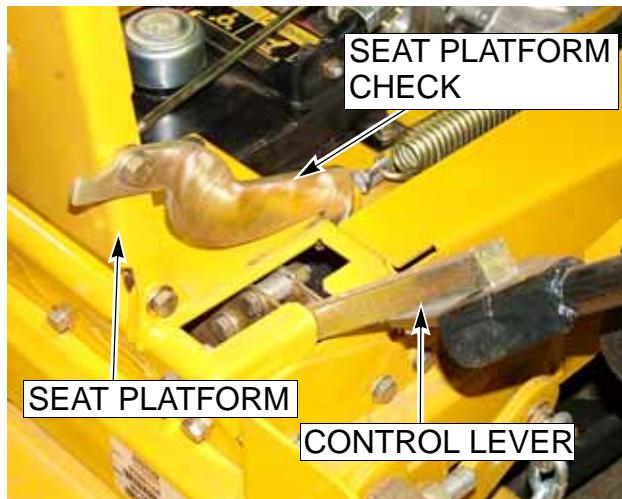


FIG. 29



WARNING: Always wear adequate eye protection when servicing the hydraulic system and battery.

Hydraulic system



IMPORTANT: Never use hydraulic or automatic transmission fluid in this system; use only motor oil as specified. Remember, dirt is the primary enemy of any hydraulic system.

WARNING: Hydraulic oil escaping under pressure can penetrate skin. Hydraulic oil may cause infection in a minor cut or opening in the skin. If exposed to hydraulic fluid, see a doctor at once.

Before applying pressure to hydraulic system, make sure all connections are tight and all hoses and lines are in good condition. To find a leak under pressure, use a piece of cardboard or wood — **never** use your hands. Relieve all pressure in the system before disconnecting or working on hydraulic lines. To relieve pressure, lower all attachments and shut off engine.

The 1.5 U.S. gallon (5.68 liter) hydraulic reservoir is located in front of the engine and under the operator's platform FIG. 30.

Check oil level in hydraulic system after every 50 hours of operation or weekly, whichever occurs first. Check more often if system appears to be leaking or otherwise malfunctioning.

Fluid level should be 1" from top of reservoir. Use only SAE 10W40 SG, SF/CC, CD service motor oil.

Change hydraulic system filter element (FIG. 30) after first 50 hours of tractor operation, then replace filter and oil in reservoir every 500 hours thereafter.

The system filter is located inside the hydraulic reservoir. Use a 5/8" socket to change the filter, threads are right handed. **Use a Hustler approved filter element only.**



FIG. 30

1. Smear a light coating of oil on filter's o-rings.
2. Insert the filter element into the hydraulic reservoir housing. Tighten the oil filter 10 ft.- lbs. (13.56 Nm) — DO NOT OVERTIGHTEN.
3. Start tractor engine and let run at approximately 2/3 throttle for a few minutes to work any trapped air out of the system before engaging the steering control lever.
4. Stop the engine and check the filter and connections for leaks.
5. Check the hydraulic reservoir for specified oil level. Add clean oil as necessary.

Clean or replace hydraulic reservoir cap annually. Cap may be cleaned by dipping in or flushing with cleaning solvent. Follow manufacturer's instructions and warnings for application of solvent type selected.

Fuel system



DANGER: Observe usual fuel handling precautions:

Do not smoke while refueling.

Do not fill tank with engine running or while engine is hot. Clean up any diesel fuel spills.

Allow engine to cool before storing machine inside a building.

Keep fuel away from open flame or spark and store machine away from open flame or spark if there is fuel in the tank.

Use extra caution when handling diesel fuel and other fuels. They are flammable and vapors are explosive. A fire or explosion from diesel fuel can burn you and others and can damage property.

Refuel outdoors preferably, or in well ventilated areas.

Never attempt to start engine when there is a strong odor of diesel fuel fumes present. Locate and correct cause.

Store diesel fuel in an approved container and keep it out of the reach of children. Never buy more than a 30 day supply of diesel fuel.

Always place diesel fuel containers on the ground away from your vehicle before filling.

Do not fill diesel fuel containers inside a vehicle or on a truck or trailer as interior carpets or plastic truck bed liners may insulate the container and slow the loss of any static charge.

When practical, remove equipment from the truck or trailer and refuel the equipment with its wheels on the ground. If this is not possible, then refuel the equipment on the truck or trailer using a portable container and not a diesel fuel dispenser nozzle. If a diesel fuel dispenser nozzle must be used, keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete.



WARNING: Diesel fuel is harmful or fatal if swallowed.

Long-term exposure to vapors can cause serious injury and illness.

Avoid prolonged breathing of vapors.

Keep face away from nozzle and fuel tank or conditioner opening.

Keep fuel away from eyes and skin.

The fuel tanks are located in the tractor's fenders (FIG. 31). Total capacity for the fuel tanks is 15 U.S. gallon (56.8 liter).



FIG. 31

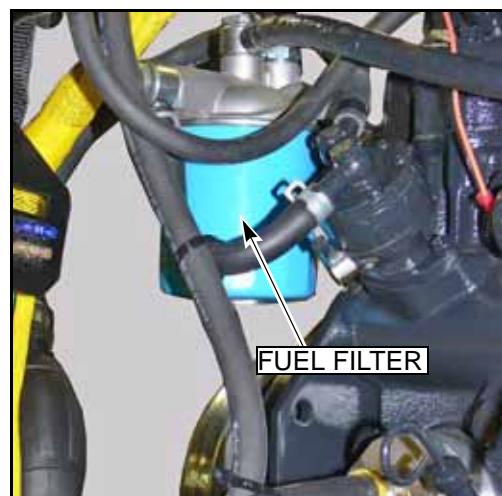


FIG. 32

Use #2 diesel fuel only.

The fuel filter (FIG. 32) is installed at the front right side of the engine. Replace filter annually or after every 500 hours of operation, whichever occurs first.

When replacing the fuel filter, check the fuel line hoses and fuel shut-off valve and grommet for any cracks or leaks. Replace as needed.

This machine has a priming bulb (FIG. 33) which is located between the fuel shutoff valve and the mechanical fuel pump.

If the fuel system runs dry, use the following procedure before re-starting the engine:

1. Refill the fuel tanks.
2. Make sure the fuel shutoff valve is turned to the full fuel tank.
3. Grab the priming bulb and compress it until it becomes firm.

4. Try and start the engine. If it will not start after 15 seconds of cranking, repeat Step 3.
5. If after trying several times and the engine still will not start, contact your Hustler Dealer.

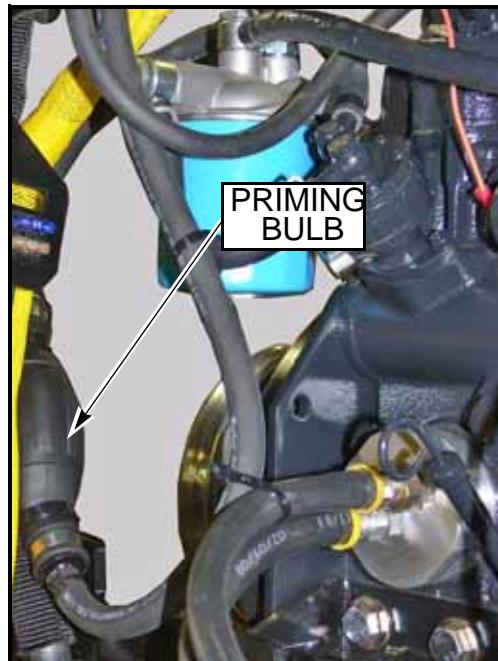


FIG. 33

Hustler Z Diesel tractors are equipped with a fuel shutoff valve located on the lower right of the front engine guard (FIG. 34). Rotate the valve to the right position to prevent fuel flow to the fuel pump. The middle position allows fuel to flow from the right fuel tank to the fuel pump (shown). The left position allows fuel to flow from the left fuel tank to the fuel pump. Close this valve to prevent fuel flow to the engine when servicing the fuel system or when transporting the unit on a trailer or truck.

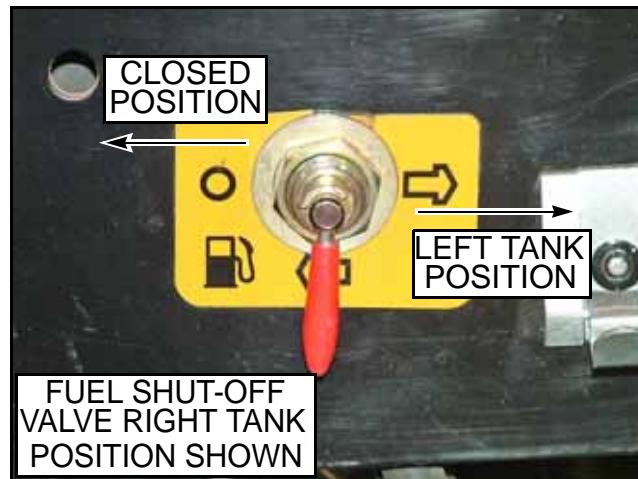


FIG. 34

Engine oil and filter

Check engine oil daily and after every 4 hours of operation. The crankcase dipstick is located at the front of the engine (FIG. 35) and oil filler tube is located on top of the engine (FIG. 36). Tractor must be sitting level when checking oil. Refer to engine manual and maintenance schedule for oil recommendation and capacities.



FIG. 35



FIG. 36

Change the engine oil and filter (FIG. 37) after the first 50 hours of operation, per the engine manufacturer's recommendations after that. If tractor is being operated in extremely dirty conditions, then it is recommended oil be changed more frequently.

The oil drain is located on the underneath side of the engine FIG. 38



FIG. 37



FIG. 38

Changing the oil

1. Before adding engine oil, place the unit on a level surface, then remove the dipstick to provide crankcase ventilation.
2. Use an engine oil fill device that is smaller than the oil fill hole, allowing air to pass along the sides of the oil fill hole.
3. Add engine oil slowly, at a rate that does not flood the valve cover.
4. When changing the engine oil, add the exact amount specified in the engine owner's manual.
5. Allow enough time for the oil to drain into the oil pan. Confirm this by checking the oil level with the dip stick, repeatedly, until it stabilizes.
6. Check the oil level, accounting for the higher oil level due to the oil filter oil capacity.
7. If the oil level is low, oil may have entered Engine Breather Valve System and into the intake manifold and the cylinder(s). If so, the oil must be removed before cranking the engine.

OIL REMOVAL FROM THE ENGINE BREATHER VALVE SYSTEM

IN THE EVENT THAT OIL ENTERS THE ENGINE BREATHER VALVE SYSTEM, THE OIL MUST BE REMOVED BEFORE CRANKING THE ENGINE.

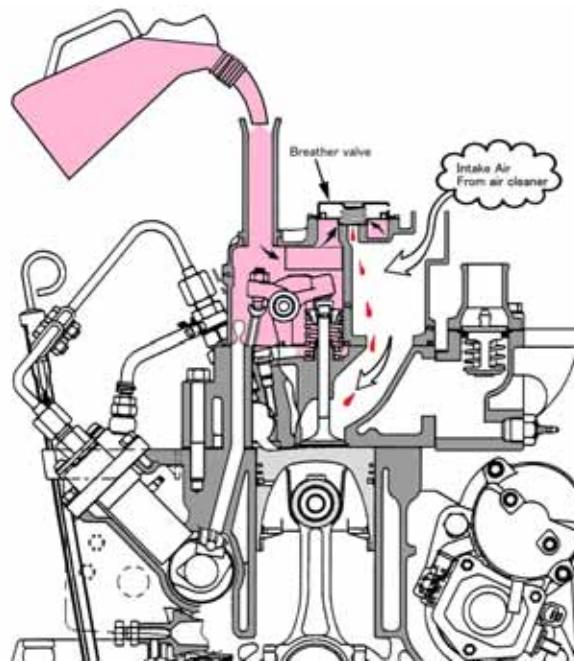


FIG. 39

REFER TO FIG. 39 FOR THIS PROCEDURE.

1. If oil has entered the engine breather valve system, it may be found in the intake manifold. Remove the intake manifold for verification.
2. Oil that has entered the engine through the engine breather valve system can be removed from the cylinders by removing all the fuel injection nozzles and turning the engine with the starter until all oil is exhausted.

Engine air filter

Perform engine air filter maintenance per the scheduled maintenance chart. See "SERVICE AT INTERVALS INDICATED" on page 10-15

A specially designed dry filter is standard equipment on the Hustler Z Diesel tractor and supplies clean combustion air to the engine FIG. 40.



FIG. 40



WARNING: Many engine failures can be attributed to improper air cleaner servicing. Ingested dust and dirt will cause cylinder, piston and bearing damage in a few hours. "Dusted" engines will result from:

1. Overservicing the air filter element.
2. Improper installation.
3. Damaged filter, seals or canister.
4. Incorrect air filter element size.
5. Use of poorly designed aftermarket air filter elements.

Air cleaner servicing is an inexpensive maintenance check that can prevent costly non-warrantable premature engine damage.

OVERSERVICING

Overservicing occurs when an air filter element is removed for cleaning or replacement before it is necessary. Each time the filter is removed a small amount of dirt and dust could fall in the intake system. This accumulated dirt can cause a dusted engine. It only takes a few grams of ingested dirt over the normal service life of an engine to cause a dusted engine.

Do not clean element, replace with a new element only. Cleaning used air filter elements, through improper cleaning procedures, can get dust on the inside of the filter causing dirt ingestion and engine failure.

It is important to note that whenever an air filter element is cleaned by **any method**, the person or company performing the cleaning assumes responsibility for the integrity of the filter from then on. **The Donaldson warranty for air filters expires upon cleaning or servicing in any manner because the condition of the filter after servicing is completely out of their control. Therefore, on a dust ingested engine failure, there will be no warranty consideration if the air filter element has been cleaned or serviced in any manner.**

A partially dirty air filter element works better than a new element. Therefore, a dirty filter element is not bad for the engine unless it is excessively restricting the air flow and engine performance is affected. The reason is simple. The media in the filter must be porous to allow air to pass through it. When dirty air passes through the filter, the dirt plugs some of the holes in the media and actually acts as part of the filter media. When the next round of dirt enters, the first dirt helps filter out even smaller particles making the filter more efficient at stopping dirt from entering the engine. This is referred to as barrier filtration.

Of course, at some point the filter media becomes too clogged to allow air to pass.

The mowing conditions will determine the frequency of air filter element changing.

IMPROPER INSTALLATION OF AN AIR FILTER ELEMENT

Dust must not leak past the seals on each end of the air filter element. The filter must be aligned within the canister and properly seated for an effective seal so that no dirt can enter the engine.

DAMAGED FILTER, SEALS OR CANISTER

Never bang or bump the filter element against the tire or any solid object, as dust and dirt particles will be forced through the media causing continual passing of dirt into the engine. Visually inspect the outside of the air cleaner canister periodically for external damage and replace if necessary.

INCORRECT AIR CLEANER ELEMENT

Use only the correct Donaldson air filter element, Hustler part number 785261, which is designed to fit the canister properly.

Hustler air filter elements have the correct media composition, filter area, micron size and dimensions. Always use genuine Hustler filters. Many aftermarket filters have been found to be incompatible with Hustler's canisters and engines.

The air filter must remain intact to block passage of dirt and foreign particles from entering the engine. Being inclined to disbelieve the need for more expensive air filter elements used on diesel engines may cause some individuals to opt for a less expensive part.

The filter element must be sufficient size and construction to withstand stresses, caused by rapid cycling of the air volume demanded by the engine, without cracking or tearing under fatigue and pressure (especially diesel engines). Therefore, Hustler Turf Equipment and the engine manufacturers have carefully selected a reliable filter designed to fit the needs of the engines.

Owners should be reminded that failure to use original equipment replacement parts is an "alteration" and will not be considered for warranty in the event of engine damage.

RECOMMENDED SERVICE PROCEDURE

1. Release clamps and remove element. Clean the canister with a damp cloth.
2. Before installing a new element, inspect it by placing a bright light inside and rotate the

element slowly, looking for any holes or tears in the paper. Also check gaskets for cuts or tears. Do not attempt to use a damaged element which will allow abrasive particles to enter the engine.

3. Reinstall the dust cup. Make sure it seals all the way around the air cleaner body, then tighten the clamps.
4. Check all fittings and clamps periodically for tightness and inspect hoses for holes or cracks.
5. Periodically check the intake hose for signs of ingested dust. Locate and repair the source of ingested dirt.
6. Never operate a machine without an air filter installed.

SAFETY AIR CLEANER FILTER

The Shibaura diesel engine is equipped with a safety filter. FIG. 41 The air cleaner element slides over the safety filter. The recommended safety air filter element, Hustler part number 785279, is designed to fit the canister properly.

NOTE: The safety filter does not require servicing unless it becomes contaminated with dirt or moisture.



FIG. 41

AIR RESTRICTION INDICATOR

Any unit with a Shibaura diesel engine will have an air restriction indicator installed in the air cleaner FIG. 42.

Replace the element whenever the restriction indicator shows reaches the change filter red line. Check the indicator daily and replace element as needed or annually whichever occurs first.

Reset the indicator by pushing in on the yellow button after each element change FIG. 42

A restriction indicator takes the guesswork out of air cleaner servicing and allows you to safely benefit from the filter's optimum performance.

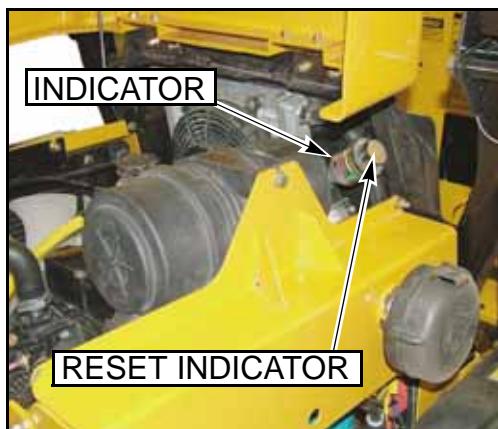


FIG. 42

Belt replacement

FIG. 43, FIG. 44, FIG. 45, FIG. 46 and FIG. 47 show diagrams and descriptions of the unit's belt drive systems.

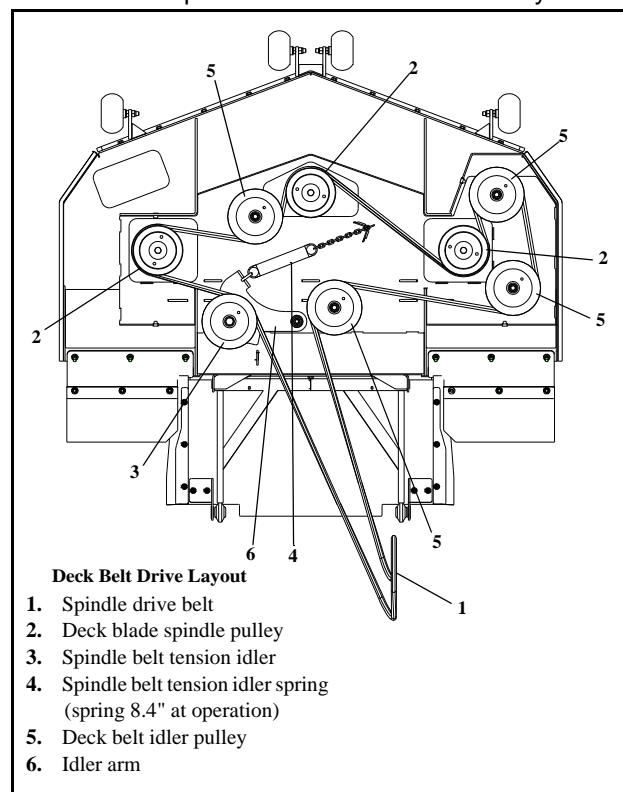
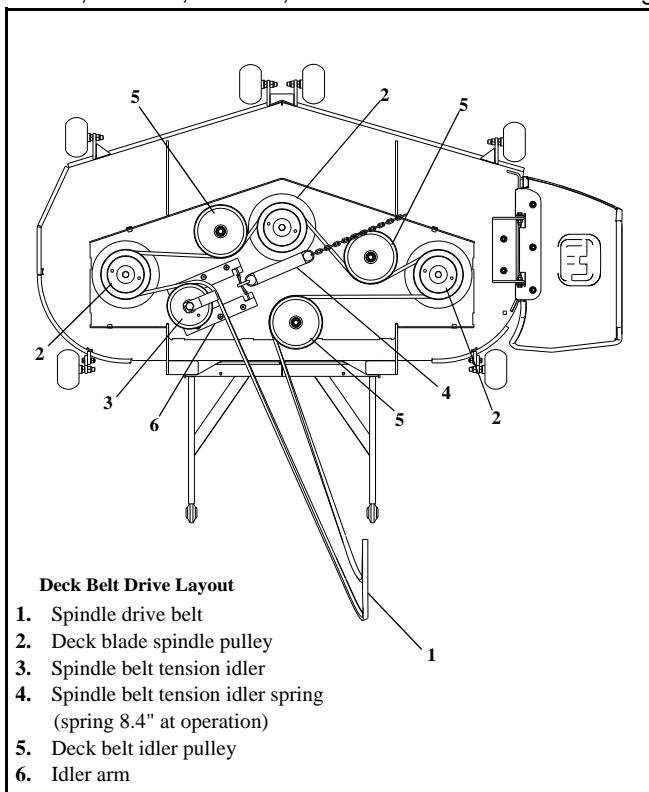


FIG. 43

FIG. 44

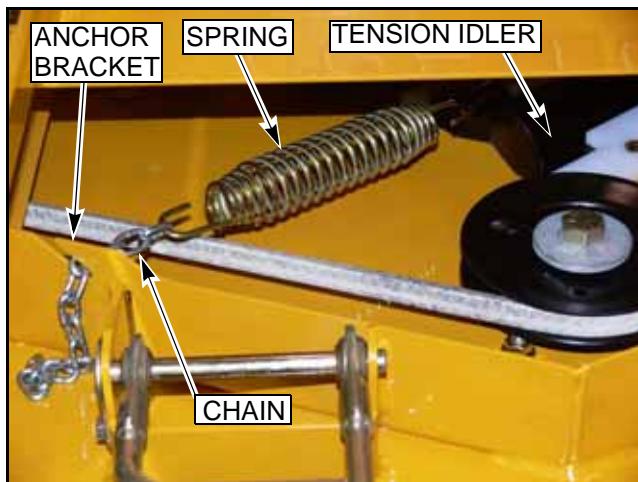


FIG. 45

Viewed from right side of unit

1. Electric deck clutch
2. Deck drive belt
3. Fixed pulley

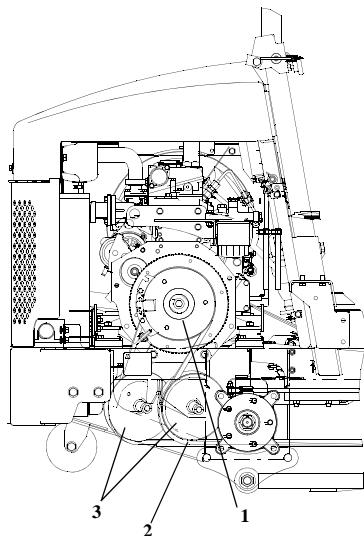


FIG. 46

Viewed from left side of unit

1. Pump belt
2. Engine pulley
3. Idler pulley
4. Pump idler arm
5. Pump pulley
6. Pump idler spring

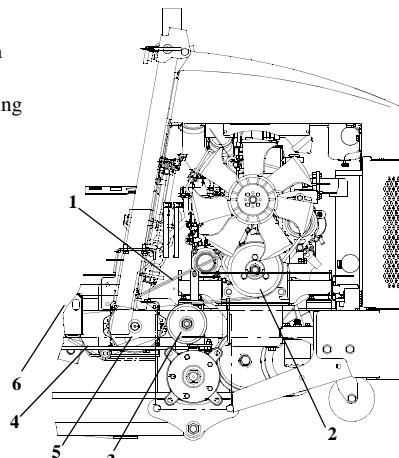


FIG. 47



WARNING: If the pump belt fails, loss of control will occur especially when operating on a slope. If you lose steering control while operating the machine, place the steering control levers in the park brake position immediately. Inspect the machine and involve your Hustler dealer to resolve the problem before continuing to operate.

Inspect these belts frequently for wear and serviceability. Replace a belt that shows signs of severe cuts, tears, separation, weather checking and cracking, or burns caused by slipping. Slight raveling of belt covering does not indicate failure, trim ravelling with a sharp knife.

Inspect the belt pulley grooves and flanges for wear. A new belt, or one in good condition, should never run against the bottom of the groove. Replace the pulley when this is the case, otherwise belt will lose power and slip excessively.

Never pry a belt to get it on a pulley as this will cut or damage the fibers of the belt covering.

Keep oil and grease away from belts, and never use belt dressings. Any of these will destroy the belt composition in a very short time.

Mower blade maintenance

Check the mower blades daily, they are the key to power efficiency and well groomed turf. Keep them sharp, a dull blade will tear rather than cut the grass, leaving a brown ragged top on the grass within a few hours. A dull blade also requires more power from the engine.

Replace any blade which is bent, cracked or broken.



WARNING: Never attempt to straighten a bent blade by heating, or weld a cracked or broken blade as the blade may break and cause serious injury. Replace worn or damaged blades.



DANGER: Never work with blades while engine is running or deck clutch switch is engaged (on). Always place deck clutch switch in the **disengaged** position, place control levers in the park brake position and turn engine off and disconnect negative battery cable. Block up mower when you **must** work under it. Wear gloves when handling blades. **Always check for blade damage** if mower strikes rock, branch or other foreign object during mowing!



WARNING: Always wear adequate eye protection when grinding mower blades.

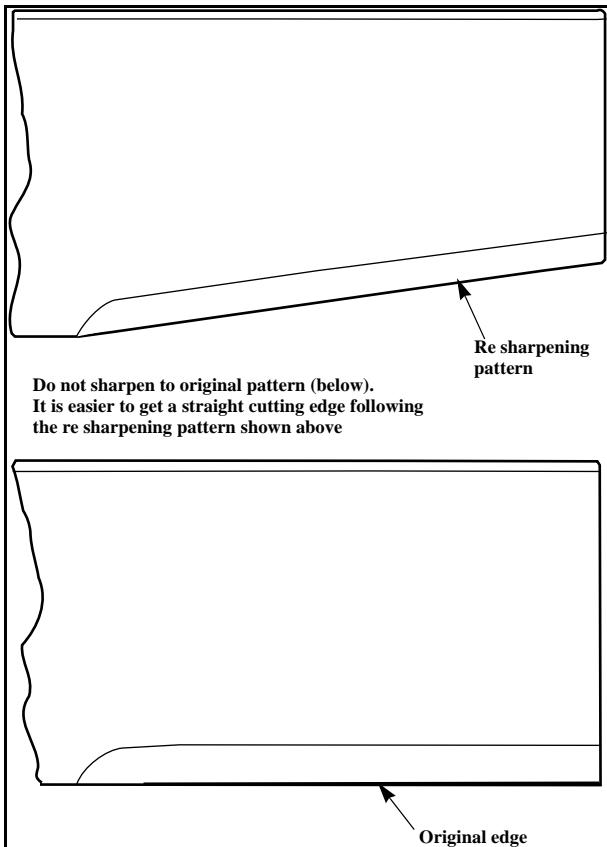


FIG. 48

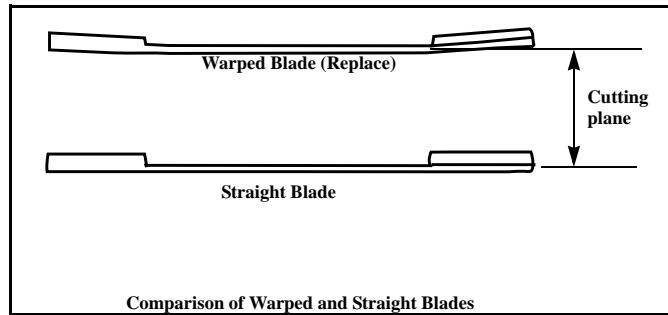


FIG. 49

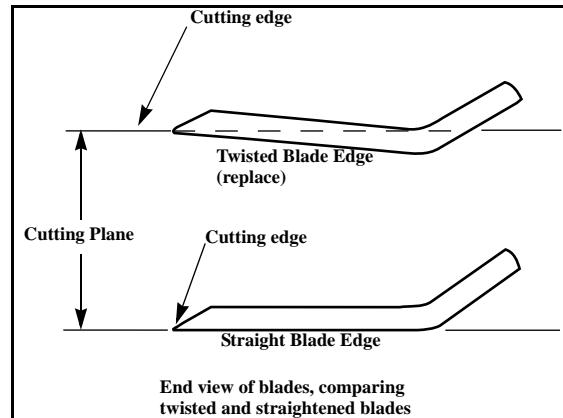


FIG. 50

Mower blade removal

Use a 15/16" wrench to remove the 5/8" cap screw holding the blade to the spindle shaft from underneath.

Sharpen the blades on a grinder following pattern as shown (FIG. 48). Touch-up sharpening can be done with a file. Check the blades for balance following grinding. A commercial balancing tool is available through most hardware supply stores, or balancing can be done by placing the blade on an inverted line punch or 1/2" bolt. Blade should not lean or tilt. Spin the blade slowly, blade should not wobble. If blade is out of balance, true it up before reinstalling.

Lay the blade on a flat surface and check for distortion (FIG. 49 and FIG. 50). Replace any distorted blade.

Do not re-use spindle bolts which have stripped, worn or undercut threads. Torque bolts on spindles to 118 foot-pounds when reinstalling blades.



WARNING: When mounting blades, rotate them after installation to ensure blade tips do not touch each other or sides of the mower.



WARNING: Failure to correctly torque the bolt may result in the loss of the blade which can cause serious injury.



WARNING: Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves and use extra caution when servicing them.

Adjustment

Introduction

Your Hustler Z Diesel was adjusted before it left the factory and was checked during predelivery setup. However, after start-up and continued use, a certain amount of break-in wear will cause some adjustments to change.

Remain alert for unusual noises, they could be signaling a problem. Visually inspect the machine for any abnormal wear or damage. A good time to detect potential problems is while performing scheduled maintenance service. Correcting the problem as quickly as possible is the best insurance.

Clear away heavy build-up of grease, oil and dirt, especially in the area of reservoir and oil and engine combustion air; minute dust particle are abrasive to close-tolerance engine and hydraulic assemblies.

Some repairs require the assistance of a trained service mechanic and should not be attempted by unskilled personnel. Consult your Hustler service center when assistance is needed. Seat adjustment

Steering linkage

The neutral adjustment for the control levers in the neutral position is discussed in this section.

The tractor steering has been factory adjusted to eliminate creeping when the control levers are in the neutral position (FIG. 51). However, should the tractor begin to creep, the control lever linkage can be adjusted as follows:

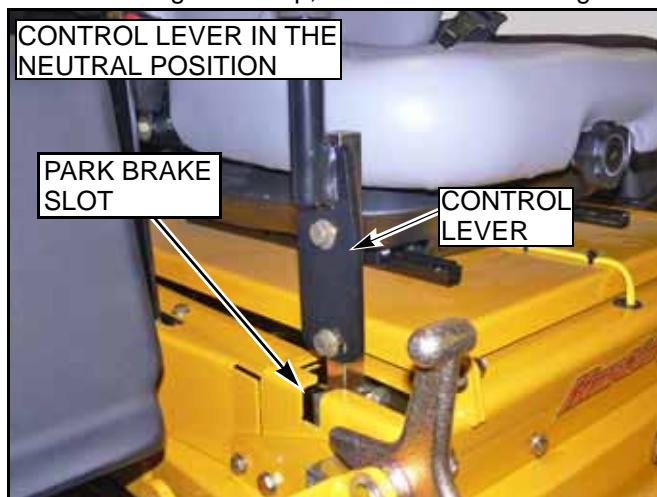


FIG. 51

CONTROL LEVER NEUTRAL ADJUSTMENT

Before considering any adjustment, check the tire air pressure. Unequal tire pressure will cause the tractor to drift to one side. Refer to tire pressure information in the Maintenance section of this manual.

Fine adjustment to the unit's steering is made with the adjustable pump linkage rods located between the control lever and pump arms. (FIG. 52).

Neutral is properly adjusted when the control levers are in the neutral position and the drive wheels are not turning.

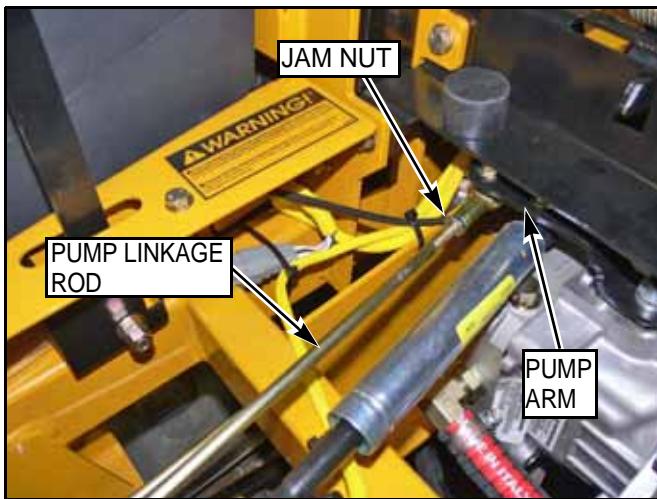


FIG. 52

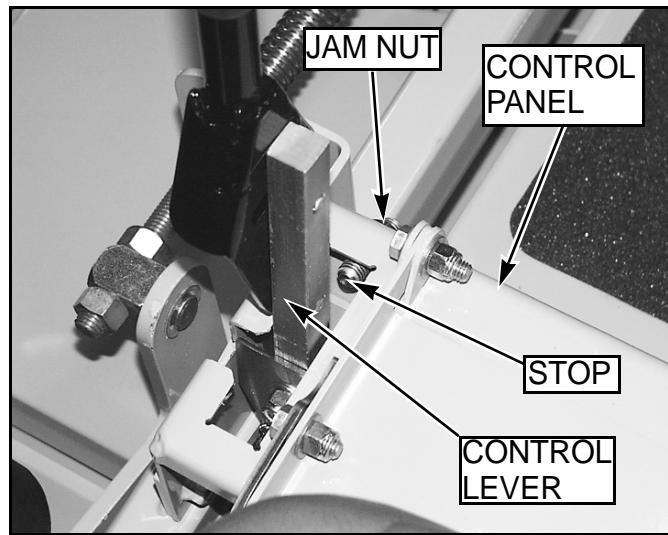


FIG. 53

If the tractor creeps in the neutral position the control linkage may be adjusted as follows:

1. Raise and block the tractor up so the drive wheels are off the floor.



WARNING: Never work under the machine or attachment unless it is safely supported with jack stands. Make certain machine is secure when it is raised and placed on the jack stands. The jack stands should not allow the machine to move when the engine is running and the drive wheels are rotating. **Use only certified jack stands.** Use only appropriate jack stands, with a minimum weight rating of 2000 pounds to block the unit up. Use in pairs only. Follow the instructions supplied with the vehicle stands.

2. Position the control lever in the neutral position. Disengage the deck clutch.
3. Start the engine and observe which way the wheels are rotating.
4. If wheel(s) are rotating forward, loosen the jam nuts on the pump linkage rods and rotate the rod to lengthen the steering control linkage until the wheel(s) come to a stop (FIG. 52). Repeat for the opposite side if necessary.

NOTE: The left linkage controls the left hydraulic pump and the right linkage controls the right hydraulic pump.

5. If wheel(s) are rotating in reverse then loosen the jam nuts on the pump linkage rods and rotate the rod to shorten the steering control linkage until the wheel(s) come to a stop (FIG. 52). Repeat for the opposite side if necessary.

NOTE: The left linkage controls the left hydraulic pump and the right linkage controls the right hydraulic pump.

6. When both wheels remain in neutral, tighten the jam nuts to lock the turnbuckle in place.
7. Test again by moving the control levers forward and backward before returning them to the neutral position. If the tires are in neutral, the unit is now ready for operation.
8. After adjusting for neutral it may be necessary to re-adjust the control lever stop (FIG. 53).

Control lever stops

The control lever stops (FIG. 53) are designed to do two things: First, and most important, they must keep the pumps from bottoming out internally. Secondly, the stops may be adjusted to help drive straight when the control levers are pushed forward against the stops.

To keep the pumps from bottoming out internally use the following procedure:

1. To make the first adjustment the tractor engine must NOT be running.
2. Check to make sure the control levers are against the stops before the pumps are bottomed out internally.

To do this, gently and slowly move the control levers forward and feel if there is some resistance on the pump lever before the control levers hit the stops. Check one side at a time. If you sense that the pump arms are stopping the forward motion of the control arms, loosen the jam nut on the adjustable stop of the corresponding side and turn the stop (set screw) inward to stop the control levers slightly before the pump bottoms out. Lock in place when the adjustment is correct by re-tightening the jam nut.

3. Do this for each side.

To adjust the stops for driving straight when control levers are against the stops during operation:

1. Determine which drive tire is rotating too fast when both control levers are against the stops. Then stop the tractor and loosen the lock nut on the side which is rotating too fast and turn the stop (set screw) inward to stop the control lever sooner. Tighten the lock nut on the stop and test again. Repeat this procedure until unit drives straight.

NOTE: Since this is a hydrostatic drive, variables such as temperature of oil, efficiency of pumps and motors, tire pressure etc. may effect the consistency of the ability to rely on the stops to drive straight without the operator making minor steering adjustments with the control arms.

Steering dampener

The steering dampener (FIG. 54) is spring loaded to return the control levers to the neutral position from the reverse position. This gives the operator a sense of neutral during operation.

To set the steering dampeners in the correct operating position follow these steps:

1. Place the control lever in the neutral position.
2. Loosen the steering dampener's front ball stud.
3. Pull the dampener spring housing past the point that the internal spring is engaged.
4. Release the dampener spring housing and allow the internal spring to bring the housing back to the neutral position.
5. Tighten the nut on the steering dampener's front ball stud.



FIG. 54

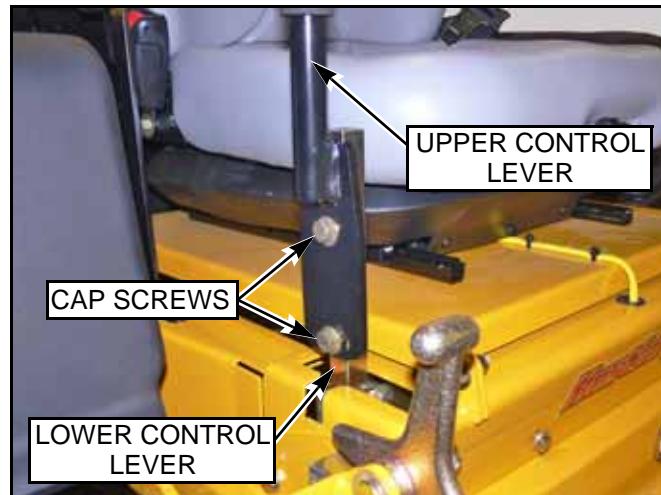


FIG. 55

Control lever adjustment

The control levers can be adjusted for operator comfort. By loosening the cap screws that attaches the upper control lever to the lower lever FIG. 56, the upper control lever can be pivoted to fit the operator's personal preference.

The control levers should be adjusted so that they align with each other when in the neutral position.



FIG. 56

Park brake spring adjustment

1. Occasionally check the park brake spring adjustment using the following method:
2. Shut engine off, place control levers in the park brake position, disengage deck clutch, remove ignition switch key and disconnect negative battery cable before doing any adjustments.
3. Measure the park brake spring. It should be compressed to 1-5/8". If it is not, adjust the nylock nut until the proper spring compression is achieved, FIG. 57.
4. Repeat for the other side.

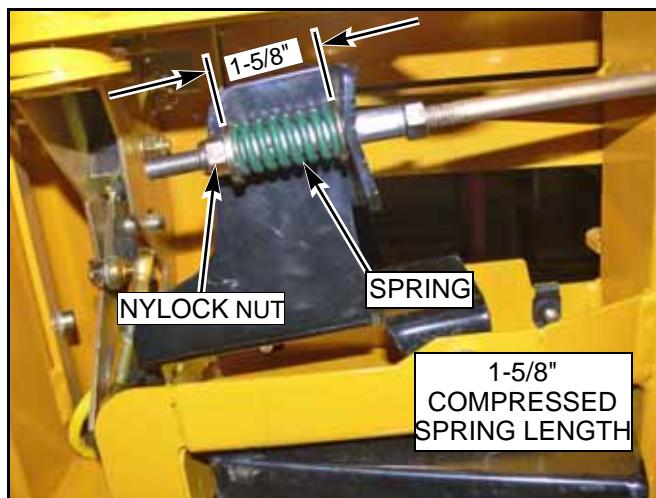


FIG. 57

Hydraulic pump belt adjustment

The pump drive belt tension remains constant by means of a tension idler and spring (FIG. 58). There is no tension adjustment of this belt.

NOTE: Replace the belt every 400 hours or every two (2) years whichever comes first.



WARNING: If the pump belt fails, loss of control will occur especially when operating on a slope. If you lose steering control while operating the machine, place the steering control levers in the park brake position immediately. Inspect the machine and involve your Hustler dealer to resolve the problem before continuing to operate.

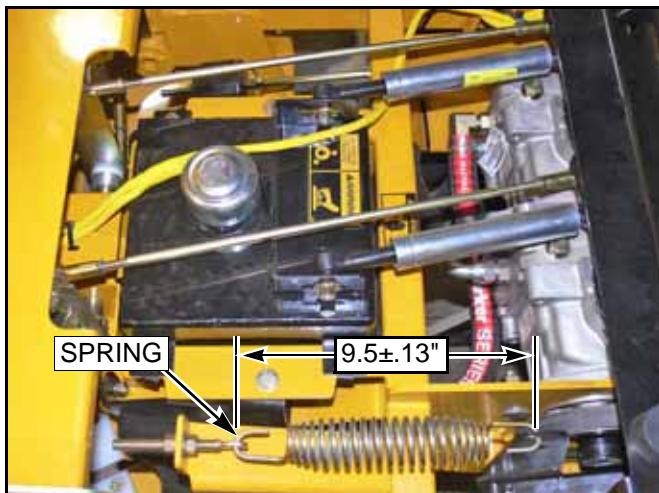


FIG. 58

Deck drive belt adjustment

The spindle belt tension remains constant by means of a tension idler and spring (FIG. 59). The spring tension should be such that the belt does not slip under normal operating load conditions, assuming the belt is not excessively

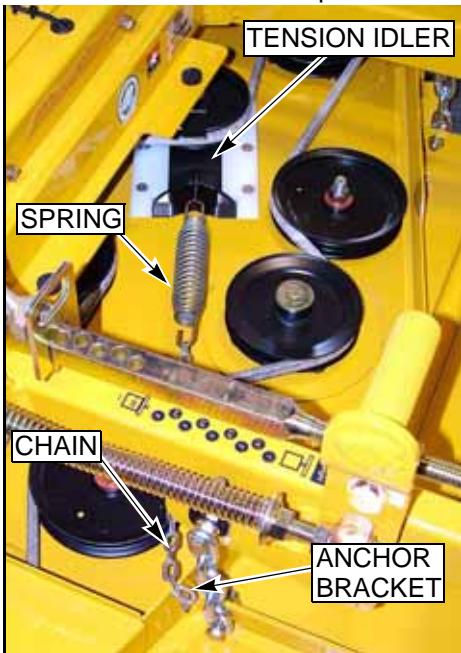


FIG. 59

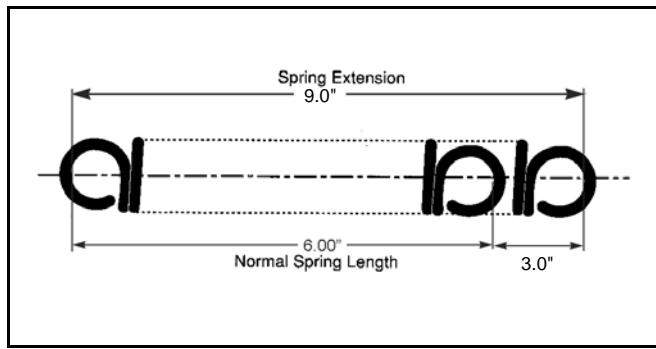


FIG. 60

worn or damaged. As belt stretches and wears in, adjustment may become necessary. To increase belt tension, move the spring chain one (or more) link(s) at the anchor bracket (FIG. 59). Installed spring length should be 9.0" -.0"/+.6" originally with adjustments of .60" per chain link (FIG. 59).

IMPORTANT: Do not over tension the spring to compensate for a badly worn belt or pulley.

Engine RPM setting

The Hustler Z Diesel is designed so that the engine will run at 2950 rpm static pump load only. At this speed the hydraulic pumps are running at their maximum rated speed.

Deck leveling and height adjustment

The mower deck has three areas that may need to be checked and adjusted periodically. Before considering any mower deck leveling adjustments, check that the tire air pressure is within the specified range.

DECK LEVEL ADJUSTMENTS

Leveling the deck must be done in the following manner and order:

1. Check tire pressures to make certain they are properly inflated before starting to level deck. The recommended pressures are as follows:

Drive Wheels	8-12 PSI
Front Wheels	8-12 PSI



WARNING: Stop engine. Make sure deck clutch switch is **in the down (OFF) position**. Remove ignition key. Place control levers in the brake position before leaving machine.

2. Park the unit on a flat surface.
3. Raise deck and place 3" of blocking under all 4 corners of the deck (FIG. 61). This will set the cutting height at 3 1/2". **NOTE:** Back of deck will automatically be set 1/4" higher.
4. Set cutting height at 3 1/2" in the height indicator by placing the height adjusting stop in the 3 1/2" hole, and turning the height stop so that the pin side is against the stop handle, FIG. 62.
5. Clamp the height adjusting stop against the stop handle. This will assure that the height will not move during the setting process. Otherwise, spring pressure from the deck lift springs will tend to pull the stop away from the handle.
6. Loosen all nuts on the deck lift threaded rods, and the hardware on the adjuster (on the right front), until all the deck lift chains are loose, and the deck is sitting tightly on all four blocks (FIG. 63, FIG. 64 & FIG. 65).
7. Loosen the two nuts on the front of height indicator so that the foot pedal is free (FIG. 66).
8. Start the leveling process on the **left front** of the tractor.

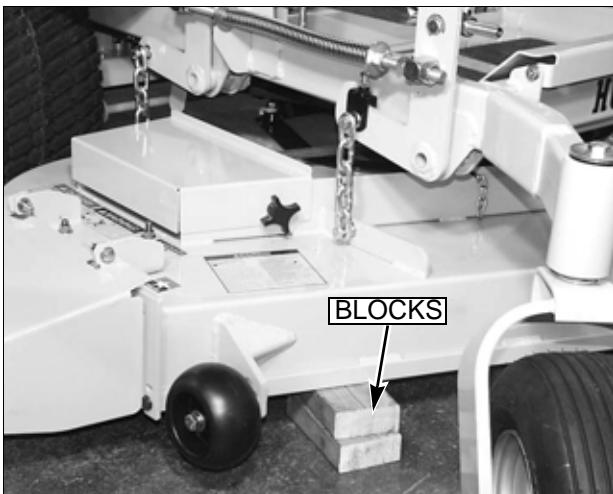


FIG. 61

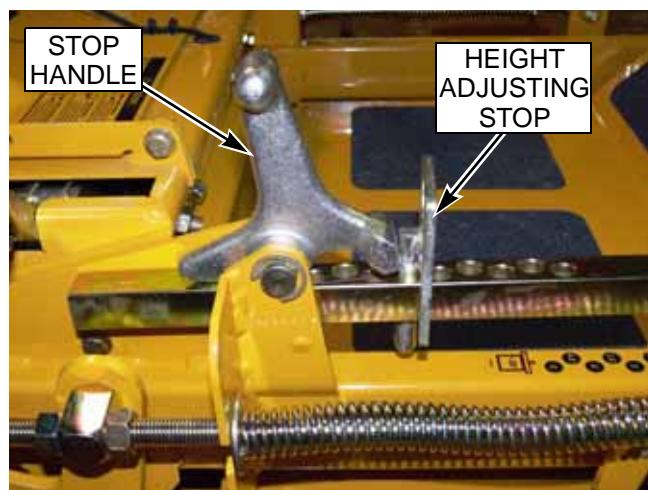


FIG. 62

9. Set the amount of threads protruding on the deck lift rod from the lift block at approximately 1" (FIG. 67).
10. Jam both nuts against the block.
11. Push or pull on the deck lift foot pedal until the **chain on the left front** just becomes tight, making sure that the deck stays tight against the 3" block.
12. While keeping the chain tight, tighten the nuts against the deck lift block on the height indicator rod (FIG. 66).
13. Go to the **right front** of the tractor.
14. Loosen the 5/16" jam nut on the adjuster lift chain (FIG. 65), and back the adjuster bolt out to allow the adjuster to move up and down freely.

15. Be sure that adjuster is free to move up and down.
16. Tighten the adjuster bolt until the chain just becomes tight, making sure that the deck stays tight against the 3" block.
17. Tighten the adjuster bolt jam nut to prevent the adjuster bolt from moving (FIG. 65).
18. Tighten the hardware holding the chain and adjuster onto the deck lift arm.

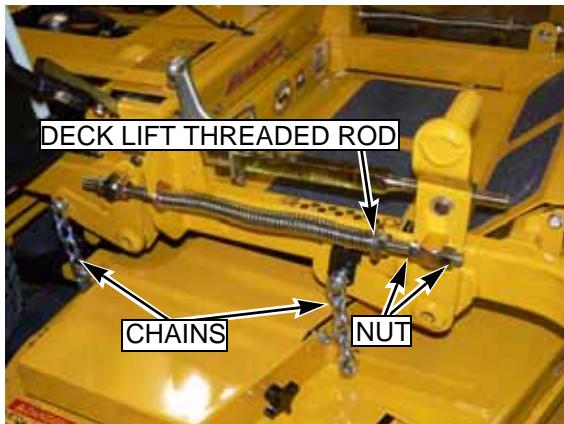


FIG. 63

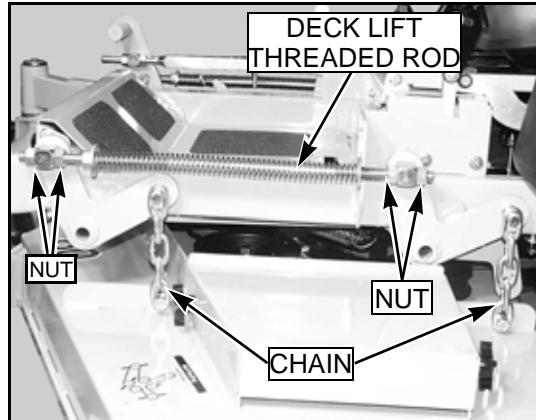


FIG. 64

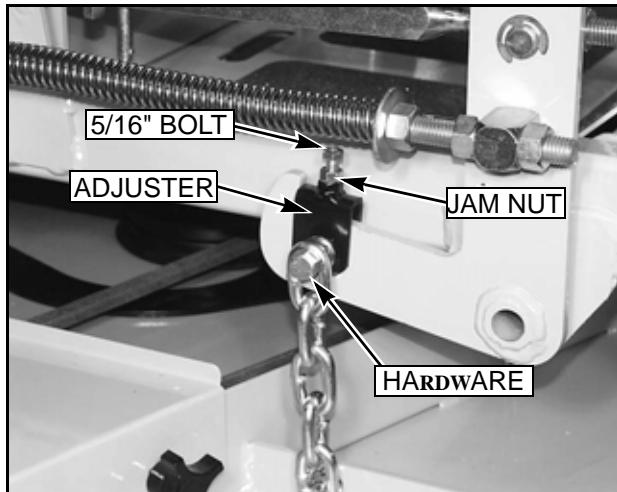


FIG. 65

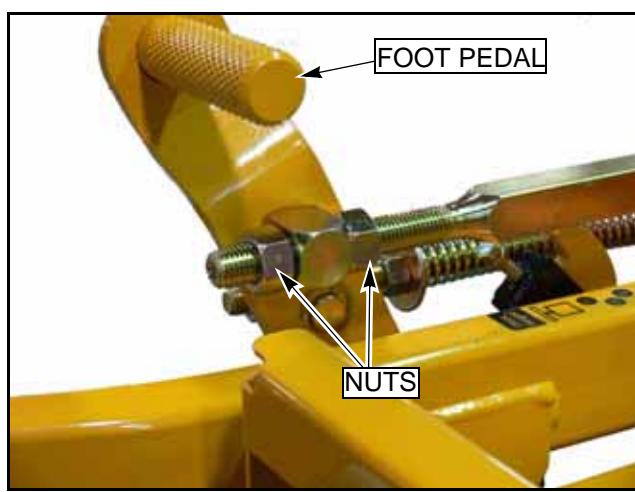


FIG. 66

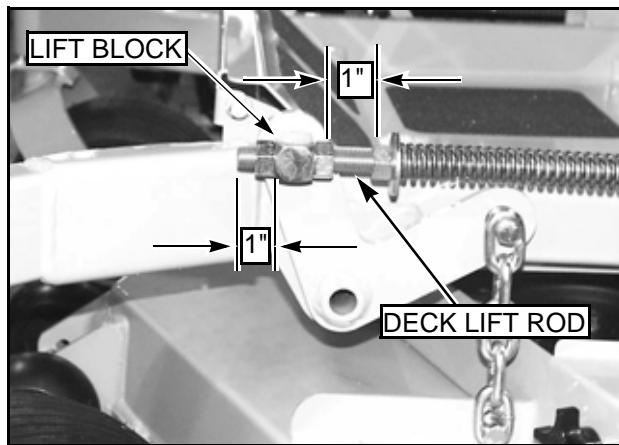


FIG. 67

19. Go to the **right rear** of the tractor.
20. Make sure that there is still slack in the chain. If not, loosen the two nuts on the block holding the threaded rod until there is slack in the deck lift chain (FIG. 65).
21. Tighten the appropriate nut until the chain just becomes tight, making sure that the deck stays tight against the 3" block.
22. Tighten the other nut on the opposite side of the block, and jam them tightly together against the block.

- 23. Go to the **left rear** of the tractor.
- 24. Make sure that there is still slack in the chain. If not, loosen the two nuts on the block holding the threaded rod until there is slack in the deck lift chain (FIG. 63).
- 25. Tighten the appropriate nut until the chain just becomes tight.
- 26. Tighten the other nut on the opposite side of the block, and jam them tightly together against the block.
- 27. Compress the deck lift assist springs so that there is 1" of space between the front nut on the spring and the rear nut on the deck lift block (FIG. 67). Typical both sides.
- 28. When completed, all chains will be tight, and deck cutting height will be set to the deck height indicator.

Numerical Index

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
Index					
Part Numbers					
000323	5-19	029934	7-5, 7-9, 7-13, 7-17, 7-25, 7-29, 7-33	059832	5-23
000331	8-5	031666	5-17	059931	7-5, 7-9, 7-13, 7-25, 7-29
004317	5-7	031997	6-7, 7-3, 7-7, 7-11, 7-15, 7-23, 7-27, 7-31	060889	5-19
005116	5-3, 7-3, 7-11, 7-15			061077	6-6
005231	5-21	032763	3-3	061101	6-3, 8-3
008193	3-5	032771	3-3	061812	5-11
008573	5-3	033035	5-15, 5-17	063198	5-23
010306	5-17	034272	3-5, 4-3, 4-7, 5-3, 5-13, 5-15, 5-17, 5-23, 8-5	063297	5-17
011510820	5-3	034843	7-34, 7-35	064345	3-5
011841	5-3	036236	3-5, 5-3, 5-13, 5-15, 5-17, 5-23	068239	6-7
012005	7-34, 7-35			068346	5-15
015495	4-3, 5-7, 7-3, 7-7, 7-11, 7-15, 7-23, 7-27, 7-31	037887	7-34, 7-35	068551	5-7, 5-11, 5-17, 5-21
015511	6-4, 6-5	038398	7-23, 7-27, 7-31	077123	7-34, 7-35
015818	5-19	038836	5-19	077859	5-11
016253	5-13, 5-15, 7-23, 7-27, 7-31	039677	6-4, 6-5	080358	4-9, 5-13
016410	5-3	041475	6-3	083279	8-5
016527	5-17, 7-5, 7-9, 7-13, 7-17, 7-25, 7-29, 7-33	041483	5-15, 5-19	086660	9-3
016774	5-3, 5-23	041491	5-19	101477	2-3, 4-4, 4-9, 5-3, 7-3, 7-7, 7-11, 7-15
016816	5-23	043570	5-3	103010	7-3, 7-11, 7-15
016899	4-9	045088	5-3	103184	
016972	5-7, 7-5, 7-9, 7-13, 7-17, 7-25, 7-29, 7-33	045336	5-21	103192	
017079	5-3	045765	6-3	103200	
017129	8-5	045898	5-23	103721	
018846	4-3	047456	4-4	103739	
019521	6-4, 6-6	047712	5-7	103986	
023100004	5-21	051169	8-3	103994	
023100008	5-3	052100420	5-3	107620	
023317	5-11	052860	2-3, 5-23, 7-3, 7-7, 7-11, 7-15, 8-5	107621	
023655	4-7, 4-9	053199	4-7, 7-3, 7-7, 7-11, 7-15, 7-23, 7-27, 7-31	107712	
024927	5-17	053678	5-3, 5-21	107975	
025007	5-7, 7-5, 7-9, 7-13, 7-17	054502	2-3, 3-5, 5-3, 5-7, 5-21, 5-23, 8-5	107978	
025296	5-7, 6-3, 7-27, 8-3	055749	4-3, 8-3	108013	
025395	7-3, 7-7, 7-11, 7-15, 7-19, 7-21, 7-23, 7-27, 7-31	055822	4-7, 5-19	108035	
028118	5-7, 7-5, 7-9, 7-13, 7-17, 7-25, 7-29, 7-33	055939	5-7, 5-11, 5-17	108212	
028274	3-5	055947	5-3, 5-23	108215	
029751	7-21	056069	2-3	108221	
029868	5-17	056077	5-11, 5-23	108241	
029876	4-7, 5-21	057661	5-13	108254	
		058776	4-9, 5-17, 7-5, 7-9, 7-13, 7-17, 7-23, 7-25, 7-27, 7-29, 7-31, 7-33	108256	
				108501	7-21
				108516	7-19
				108517	7-21
				108518	7-21
				108531	7-21
				108532	7-21
				108533	7-21
				108536	7-7

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
108607	7-15	109559	5-15	359547	9-4, 9-5, 9-6, 9-7,
108619	7-19	109589	5-3		9-8, 9-9
108620	7-21	109617	2-4	373191	7-9, 7-13, 7-17
108621	7-21	109621	2-4	385710011	5-23
108649	7-3	109624	2-4	387035	6-3
108661	7-19	109684	8-5	538850	7-5, 7-25
108662	7-21	109718	4-9	549105	2-4, 7-15
108663	7-21	109721	5-17	549113	2-4
108813	4-7	109722	5-17	549121	2-4
108816	7-31	109725	5-7	549139	2-4
108932	2-4	109729	5-23	549154	7-11
108976	5-3	109745	5-17	549162	7-7
108977	5-15	109821	1-1	549170	7-3
109073	5-15	109839	4-4	549188	8-5
109104	2-3	109948	7-25, 7-29, 7-33	549345	3-3
109105	5-17	110180	7-27	549352	5-11
109106	8-5	110181	7-27	549360	5-15
109108	5-21	110182	7-27	549378	5-23
109109	4-9	110402	7-27	549386	5-23
109110	4-9	110411	7-29	549394	5-13
109118	4-7	110412	7-29	549402	5-15
109127	5-7	110441	7-31	549410	2-3
109136	5-17	110448	7-33	549584	7-31
109137	5-15	110449	7-33	549592	7-27
109144	5-15	110450	7-23	549618	2-4
109259	4-4, 4-7	110458	7-25	549667	7-23
109260	4-4, 4-7	110459	7-25	549758	2-4
109271	5-15	110466031	5-3	549766	2-4
109279	5-13	110471	7-23	600122	5-7
109341	5-13	110472	7-23	600221	4-7
109355	4-9	110623	2-4	600296	7-25, 7-29, 7-33
109358	5-3	110626	2-4	600320	5-15
109366	3-3	110628	2-4	600437	4-3
109399	2-3	130306190	5-3	600893	7-34, 7-35
109401	5-11	130366120	1-1, 5-3	600899	9-3
109413	5-17	140517020	1-1, 5-3	600901	1-1, 7-29
109419	5-3	212472	7-5, 7-9, 7-13, 7-17,	600930	7-23
109420	5-23		7-25, 7-29, 7-33	600941	9-3
109421	5-23	259812	7-5, 7-25, 7-29, 7-33	600961	2-4
109482	7-23, 7-27, 7-31	314104	7-3, 7-7, 7-11, 7-15	600994	7-31
109483	7-23, 7-27, 7-31	314990013	5-3	601001	3-7
109484	7-23, 7-27	344267	6-3	601012	1-1, 7-33
109485	7-23, 7-27	347443	7-5, 7-9, 7-13, 7-17	601013	1-1, 7-33
109486	7-23, 7-27, 7-31	348318	4-3	601016	5-7
109487	7-23, 7-27, 7-31	348391	4-3	601017	7-31
109490	7-31	348458	4-3	601053	5-23
109491	7-31	348862	4-4	601069	5-11, 5-15, 5-23,
109530	5-23	348946	4-4		7-23, 7-27, 7-31
109531	5-23	348987	4-7	601084	5-7
109542	7-31	349266	6-3	601087	4-4
109543	7-31	349803	7-23, 7-27, 7-31	601089	5-17, 5-23
109547	5-11	350421	8-5	601098	5-23
109549	7-25, 7-29, 7-33	350884	7-5, 7-9, 7-13, 7-17	601238	6-6
109557	5-23	352591	7-27	601246	9-3

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
601247	3-5	601493	5-3, 5-23	601694	5-19
601278	5-7	601494	3-7	601695	5-19
601279	5-7	601495	3-7	601698	5-19
601291	5-21	601496	3-7	601699	5-19
601295	5-15	601497	3-7	601713	5-7
601318	3-3	601498	3-3, 3-7, 5-4	601717	7-27
601319	5-21	601503	5-17	601722	5-7
601353	5-15	601507	5-23	601779	7-25, 7-29, 7-33
601354	5-15	601515	5-3	700484	3-7
601355	5-3	601516	5-3	704643	4-3, 8-3
601356	5-11	601517	3-7	704759	7-25, 7-29, 7-33
601357	5-11	601518	3-7	705178	4-4
601358	5-15	601519	3-7	705954	6-3, 7-5, 7-9, 7-13,
601359	5-13	601520	3-7		7-17
601360	5-13	601521	3-7	706531	5-13, 5-15
601361	5-3	601522	3-7	710194	7-23, 7-27, 7-31
601362	5-23	601523	3-3	712257	5-23
601363	5-17	601524	3-3	712919	4-9, 5-23
601364	5-17	601525	1-1, 7-17	712927	5-17
601365	5-19	601526	5-3	712967	6-3
601366	5-19	601528	1-1, 7-9	713040	5-15
601367	5-21, 5-23	601529	5-19	713198	5-15, 5-17
601368	5-23	601531	1-1, 7-5	722199	8-5
601369	5-19	601532	5-19	724716	8-5
601370	5-23	601538	5-11	727008	9-3
601371	5-23	601539	5-21	727016	9-3
601372	9-3	601540	5-21	727172	9-3, 9-4, 9-5, 9-6,
601373	5-17	601546	5-3		9-7, 9-8, 9-9, 9-10
601374	9-3	601547	5-3	727420	9-4, 9-5, 9-6, 9-7
601375	5-19	601556	3-3, 3-5	727438	9-4, 9-5, 9-6, 9-7,
601377	9-3	601557	3-3, 3-5		9-8, 9-9, 9-10
601378	5-19	601558	5-15	727453	9-4, 9-5, 9-6, 9-7,
601379	5-17	601559	5-11		9-8, 9-9, 9-10
601380	5-21	601564	5-17	727818	9-3
601381	5-21	601566	4-9	739144	5-3
601413X	1-1, 3-3	601567	5-3	747741	6-4
601422	5-7	601568	3-3	747782	6-3
601423	5-7	601569	3-3	747832	6-4
601424	1-1, 5-7	601570	3-7	752386	7-5, 7-9, 7-13, 7-17,
601427	3-5	601571	2-3		7-25, 7-29, 7-33
601428	5-3	601583	3-7	756270	4-3
601434	7-5, 7-9, 7-13, 7-17	601584	3-7	758821	5-17
601443	5-11	601592	3-3	760637	9-4, 9-5, 9-6, 9-7,
601444	8-5	601596	9-3		9-8, 9-9, 9-10
601466	1-1, 7-13	601597	9-4, 9-5, 9-6	763805	9-3
601470	5-11	601617	3-7	765339	4-9
601471	5-11	601650	5-3, 8-5	766204	7-34, 7-35
601472	5-11	601656	1-1	767954	2-3, 3-5, 4-4, 4-7,
601476	3-3	601662	5-8		4-9, 5-3, 5-7, 5-17,
601478	5-7	601673	1-1, 7-29		5-19, 5-21, 5-23, 7-3,
601483	7-23, 7-27, 7-31	601690	9-8, 9-9, 9-10		7-7, 7-11, 7-15, 7-19,
601486	5-7	601691	1-1, 7-33		7-21, 7-23, 7-27,
601487	5-3	601692	1-1		7-31, 8-5
601488	5-7	601693	5-19		

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
767962	3-5, 4-9, 5-3, 5-7, 5-11, 5-17, 6-7, 7-3, 7-5, 7-7, 7-9, 7-11, 7-13, 7-15, 7-23, 7-25, 7-27, 7-29, 7-31, 7-33	781872	7-25, 7-29	794503	9-10
		781880	2-3, 5-17	794644	5-13, 5-15
		781922	4-7	794685	1-1, 7-13
		782078	6-6	795138	5-13
		782086	6-6	795369	4-7
		782128	9-3	795377	4-7
768515	5-3, 5-7, 5-11, 5-17, 5-21, 5-23	782284	6-6	795542	5-19
768523	3-5, 4-7, 4-9, 5-3, 5-13, 5-15, 5-17, 5-21, 5-23, 7-5, 7-9, 7-13, 7-17, 7-25, 7-29, 7-33	782474	7-5, 7-9, 7-13, 7-17, 7-25, 7-29, 7-33	795583	8-5
		782573	9-3	795633	1-1, 7-29
		782763	5-13	795922	3-3
		782771	6-4, 6-5	796227	7-34
		782979	4-9	796235	7-5, 7-9, 7-13, 7-17
		782995	4-3	796235X	7-5, 7-9, 7-13, 7-17, 7-25, 7-29, 7-33,
769166	5-23	783001	4-3		7-34
769257	7-5, 7-9, 7-13, 7-17	783738	7-5, 7-9, 7-13, 7-17, 7-25, 7-29, 7-33	796250	6-6
770842	7-13, 7-29			796508	1-1, 7-25
770859	6-6	784058	6-6	796680X	7-25, 7-29, 7-33
770867	7-25, 7-29, 7-33	784066	6-6	796698	7-35
771337	3-3	784223	6-3	796714	5-7, 7-25, 7-29, 7-33
771436	9-3	784439	4-7	796722	7-25, 7-29, 7-33
775353	5-13	785121	9-3	796839	1-1, 7-25
776476	5-23	785188	9-3	797076	8-5
778217	5-7	785261	1-1, 5-13, 10-25	797167	7-25
778399	7-23, 7-27, 7-31	785279	1-1, 5-13, 10-26	797449	7-5, 7-9, 7-13, 7-17
779132	3-3, 5-3	785295	5-19	797696	1-1, 7-17
779280	3-3, 9-3	785485	2-3	797845	9-4, 9-5, 9-6, 9-7, 9-8, 9-9, 9-10
781153	4-4, 4-7	785493	2-3		
781229	4-3	785741	5-13	797910	7-5, 7-9, 7-13, 7-17, 7-25, 7-29, 7-33
781245	6-6	785808	5-23		
781260	4-4	786277	9-6, 9-9	798470	5-19
781286	4-7	786285	9-4, 9-8	798496	1-1, 7-9
781294	4-3	786426	9-3	798694	7-3, 7-7, 7-11, 7-15
781302	7-5, 7-9, 7-13, 7-17, 7-25, 7-29, 7-33	787473	3-3	798702	1-1, 7-5
781385	5-7, 7-5, 7-9, 7-13, 7-17	788166	7-3, 7-7, 7-11, 7-15, 7-23, 7-27, 7-31	798967	7-17, 7-33
		788968	9-3	798975	7-9
781419	9-7	789537	6-3	799171	9-7, 9-10
781427	9-3	791251	5-7	799189	9-5
781534	3-3	791384	5-13	799353	9-4, 9-5, 9-6, 9-7
781542	3-3	791400	5-19	808485	7-3, 7-7, 7-11, 7-15, 7-23
781567	5-3, 5-11, 6-7, 7-3, 7-7, 7-11, 7-15, 7-23, 7-25, 7-27, 7-29, 7-31, 7-33	792002	7-5, 7-9, 7-13, 7-17, 7-25, 7-29, 7-33	808493	2-4, 7-3, 7-7, 7-11, 7-15
		792051	8-5	928606A	1-1
		792150	5-3	928614A	1-1
781583	4-9	792887	7-27	928622A	1-1
781658	3-3	792986	5-19	928630A	1-1
781708	7-3, 7-7, 7-11, 7-15, 7-23, 7-27, 7-31	793489	5-21	928648	1-1
781716	4-4, 4-7	793588	9-3	928655	1-1
781831	4-3	794347	5-23	928663	1-1
781856	7-5, 7-9, 7-13, 7-17	794446	7-33		
		794495	5-3		